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# MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

G. E. MOORE,

WITH THE CO-OPERATION OF PROFESSOR PRINGLE-PATTISON, DR. C. D. BROAD, AND F. C. BARTLETT, M.A.

## CONTENTS.

	PAGE
I.—Space and Time: An Essay in the Foundations of Physics (II.): JAROSLAV ČISAŘ . . . . .	129
II.—Suggestions from Aesthetics for the Metaphysic of Quality (III.): P. LEON . . . . .	146
III.—Recent Criticism of the Idealist Theory of the General Will (I.): J. H. MUIRHEAD . . . . .	166
IV.—Discussions:	
The 'Legend' of Arnauld's Realism: J. LAIRD . . . . .	176
Reply to Professor Laird: A. O. LOVEJOY . . . . .	180
The Infinite Whole: F. C. S. SCHILLER . . . . .	182
V.—Critical Notices:	
C. D. Broad: <i>Scientific Thought</i> : D. M. WRINCH . . . . .	184
Werner Jaeger: <i>Aristoteles</i> : A. E. TAYLOR . . . . .	192
E. Leroux: <i>Le Pragmatisme Américain et Anglais</i> : H. V. KNOX . . . . .	198
VI.—New Books . . . . .	203
VII.—Philosophical Periodicals . . . . .	221
VIII.—Mind Association: Annual Meeting and Joint Session with Aristotelian Society . . . . .	230

ALSO

## COMPLETE INDEX TO VOLS. XIII-XXXII.

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## MIND

A QUARTERLY REVIEW  
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PSYCHOLOGY AND PHILOSOPHY

## I.—SPACE AND TIME: AN ESSAY IN THE FOUNDATIONS OF PHYSICS (II.).

BY JAROSLAV ČISAŘ.

## THE CONCEPTS OF TIME AND SPACE.

27. If we concentrate our attention on the whole content of our mind, we find that this content exhibits one universal characteristic of which the mind is aware before it begins to analyse it into parts, the characteristic, namely, of activity, becoming, perpetual and all-pervading change. The content of our mind tells us in the first instance and before all else that *something is going on*; and whether we premise that it is going on within us or outside us—that this activity is the activity of the mind itself or that a part of this activity is the reflexion of an external fact—activity, becoming, is an incontestable fact which the mind observes in its content.

If we divide the content of the mind into the perceptual and non-perceptual, and, contenting ourselves with the "social" criterion of the difference between the two, say that the former is received by the mind from the external world, from nature, and that the latter is produced out of the mind itself, then nature appears to us in our perceptions as a process, as a swarm or succession of events, each of which is marked by this characteristic of its being.

*Time.*—28. If we reflect upon the content of the mind as a whole, and try to find some formative relation which is valid of this whole, we always come upon this dual character of the mind: the perceptual part of the content we can order under certain perceptual attributes, the non-perceptual part under non-perceptual attributes, but, as a general rule, we cannot order parts of the one class under an attribute of the other.

If, however, we consider what is common to the ordering of both classes, and postulate the existence of an ordering relation for the *whole* content of the mind, perceptual and non-perceptual, we shall not have great difficulty in identifying this formative relation with *ordering in time*.

Time thus appears to us as an abstraction from that growth, change, activity, which is the first characteristic of which the mind becomes aware, when it looks into its own content; it is an *abstraction from the ordering of the whole content of the mind*. We may therefore define it as a formative principle, by the aid of which the whole content of the mind can be divided into slices common to its perceptual and its non-perceptual part, and which enables us to arrange the *whole* content of the mind in a one-dimensional continuum of these slices in such a way, that, of any two of them, we may say that one is *after* the other, and of any three of them, that one is *between* the other two.

29. This view conforms to the *fact* that the mind is able to say of any two parts A and B of its content whether they are (in the mind) contemporaneous or not, and, in the latter case, whether A is *after* B, or B *after* A. This fact remains a fact, whatever metaphysical explanation we give of it; it will depend upon our metaphysical position whether we ascribe to the mind the capacity to *distinguish* the temporal order of two different parts of its content, or to import this order between the parts; for us the important thing is that in any case this order ultimately exists, and from our standpoint we can regard the fact of the temporal ordering of the mind's different parts and the division of the mind's content into elements which are so ordered, as a basic datum which admits of no modification. The type of order under which the whole content of the mind<sup>1</sup> is arranged in a time-series we call *inner time*.

30. The elements of the continuum which arises with the temporal ordering of the mind's content we will call *instants*: the instant of this definition is not the instant of *time* of current phraseology, but the whole content of the mind of which we can say that it is *simultaneous with a given element of experience*. An instant in this sense will have a perceptual or a non-perceptual content; since for our purpose only the former is important, it will be as well to separate the two and give a special name to the perceptual content of an instant,

<sup>1</sup> It is perhaps hardly necessary to emphasise that the term "content of the mind" is chosen purely for want of a better expression: it must not be taken to signify that the mind is a kind of receptacle, in which thoughts, perceptions, feelings, and the like, are contained.

which we will call a *moment* (analogously to the use of the term in photography). A moment will thus be the *sum of elements of experience* which are simultaneous with any element of experience, or, in other words, *the sum of the elements of experience in a given instant*. Perceptual Experience, then, ordered in accordance with the attributes of simultaneity and non-simultaneity, can be regarded as a one-dimensional continuum of moments, and *physical time* as an ordering principle, by which the moments in this continuum are ordered, *a type of order, by which elements of experience are ordered in a one-dimensional continuum of moments*.

30.1. It may be asked whether the conception of time or that of order is the more fundamental: I imagine that logically the latter, being the broader conception, is the more fundamental, but psychologically the former; psychologically, I think, the conception of order was derived from direct experience of (inner) time, which, as we have already indicated, is an inner, indisputable, and inevitable reality. There, I believe, we have also the reason for the psychological predominance of physical time over physical space, which we will define later: whereas logically both are merely variant types of order, psychologically the former is fixed far deeper in the constitution of the mind than the latter. Logically the relation of temporality is subordinate to the relation of order, as is evident from the fact that the fundamental relation "between," while it is applicable to temporality, is applicable also to many other aspects of reality. Time is logically only a special instance of order where the relation "before-after" is expressed by the terms "earlier-later".

31. I think, however, that I ought to emphasise again that our definition is in no way intended to solve the question as to the metaphysical character of time; our aim is to find a definition which, without any metaphysical preconception, will tell us *what* time is in the perceptions with which we have to do in physics and what properties we can ascribe to it in consequence. As far as our definition goes up to the present, we can already reject as devoid of meaning any view which would affirm any deformation or discontinuity of time. Time is not a continuum or aggregate of which we could possibly predicate these properties; time is a mode of ordering a given totality of our perceptions, and it is *this totality* which may be discontinuous, or may have certain metrical properties. Time of itself cannot have metrical properties; and when we speak of "measuring time," it is merely a somewhat misleading name for the attempt to find in the continuum, in which we arrange our time percepts, a structure which will permit of a

unique determination of the "interval" between two moments. The problem arising out of this is closely connected with the problem of space and time, and its solution is very important for physics. This solution is, however, not necessary for the mere definition of space and time, and we will postpone it for a separate study, in which we propose to take up the problem of measuring continuous aggregates, with especial reference to time and space.

*Space.*—32. Moment is the name we have given to the sum of elements of experience which, for the observer who is the subject of this Experience, are simultaneous with a given element, or, in other words, with such an ideal part of a given Experience as will constitute the perceptual content of the mind in an inner instant. We chose the name moment in order better to distinguish between an instant of non-perceptual and an instant of perceptual experience. We speak of the parts of a given Experience, which come within the same moment, as being co-momentary. Between two co-momentary events there exists no relation of temporal sequence; a moment is thus nature as it would appear to a given mind in an instant, a section of nature in which there is no temporality. Such a section is, indeed, an abstraction which the mind can explore only in idea; reflexion upon it occupies a finite section of the inner time series, whereas the moment itself occupies no such finite section.

33. In the concept of moment the mind has not yet reached a reality which is not further reducible: a moment, too, can be found to be divisible into parts, and between its separate parts relations of order can be found to subsist. Proceeding along the path indicated in the foregoing section, we will postulate in every moment a relation which is applicable as between *all* parts of the moment: then this will be a formative relation, and the mode of ordering the elements of experience in a given moment we call the *Form of this moment*. Brief reflexion leads us to the conclusion that this relation, which exists between the co-momentary parts of experience, can be identified with the relation which we ordinarily call spatial. *Momentary space* can thus be defined as *the sum of those ordering relations of a given moment which can be predicated as existing between any and all parts of this moment*.

What this definition in effect says is that all events and all objects, with which physics has to do, occur in the space (that is, in spatial relations to the other parts) of some moment; taken together with the definition of time, it tells us that, through the mediation of this moment, they likewise

occur in time. It is, then, nothing but an affirmation of the fact that all percepts are in space and in time; no new truth certainly, but one strangely overlooked in most attempts to define space and time, which omit to notice the fact that space (or spatial relations) exists only in perception (or in objects which this perception represents, if our philosophy requires such reservations), and in ideas which are *ideas of perceptions*, and that "*physical time*" likewise exists only in perceptions. The essence of our definition lies in the fact that it defines space and time as relations between percepts; and it permits of the distinction between time and space by making time also a relation between the *non-perceptual* parts of the mind.

34. We know empirically that elements of experience forming a given moment can be ordered by the spatial relation in one-, two-, or at most three-dimensional continuous aggregates; every element of experience contained in a given moment can be uniquely determined by the correlation of three co-ordinates or by correlation with a three-dimensional continuum of real numbers; *a moment of experience is thus a three-dimensional continuum of elements of experience.*

A one-dimensional continuum of co-momentary elements, or instantaneous co-momentary "points," we will call an *instantaneous line*, a two-dimensional an *instantaneous surface*, a three-dimensional an *instantaneous body*.

35. Since the temporal ordering of a given experience is independent of the spatial ordering of events in different moments of this experience, and *vice versa*, and since we have found that the temporal ordering of experience is one-dimensional and the spatial ordering three-dimensional, it is evident that the continuum of elements of experience which forms the totality of our perceptions is *four-dimensional*.

Elements of experience can thus be ordered in from one up to four-dimensional aggregates, of which three, mentioned in the foregoing paragraph, will be *instantaneous*, being composed of instantaneous co-momentary elements, and four *enduring*, or *persistent*, forming a one-dimensional continuum of which the elements are instantaneous points, instantaneous surfaces and instantaneous bodies; we call them *progressive figures* of the first, second, third and fourth order. Specially important for the construction of a geometry of Experience is the first figure of the second group, which is a progressive continuous aggregate of elements of experience (or instantaneous points), that is, the progressive figure of the first order, which we call a *route*.

The spatial relations of which, on the thesis here advanced,

an intelligible account can be given, are spatial relations of *co-momentary* parts of Experience; the type of instantaneous space is once and for all given by the ordering of the moment to which it belongs, and which determines its differentiation from, or analogy with, the spaces of other moments of the same Experience.

36. From our definition of a spatial relation it is evident that spatial relations can be predicated as existing only between parts of the same moment. In spite of that, however, we are accustomed to speak of spatial relations between two events which are not co-momentary, thereby implying that the content and ordering of two distinct (not identical) moments are comparable. Such a comparison is in actuality rendered possible by the fact that moments of a given Experience constitute a psychologically continuous series; in a given psychological instant (specious present) there is present to the mind a whole series of very "near" moments, not at all clearly distinguishable from one another, which not only makes it possible to compare the content and ordering of moments in close proximity, but enables us to create a certain kind of space common to more moments than one and to speak of change of position (movement) as a reality given by immediate perception.

37. It would, however, be very difficult for the percipient mind to keep its bearings in an uninterrupted stream of events and to compare more distant moments (moments, that is, which are outside the mind's field of vision in a given "psychological instant") through the mediation of all the moments which fill the interval between them in its Experience.

Temporally, different parts of the mind vary, figuratively speaking, in the clearness with which they are apprehended by the mind: perceptions "present," with those immediately adjacent in past and future (for in a given psychological instant the mind actually anticipates the perceptions of the immediate future) are the clearest, and this clearness is subject to a progressive diminution which is gradual with the past and very rapid with the future. Out of the past and the future there emerge only those swarms of perceptions which remain "the same" in a finite section of the time series of Experience, which, in other words, endure. The mind, we may say, has a special preference for permanence, for what in the ever changing stream of Experience remains the same; and following this preference, or actuated by this necessity, it looks for those properties and relations in Experience which endure.

Impelled by this desire for permanence the mind has formed the concept of *permanent space*, which may be defined as the *sum of the enduring spatial relations in a given Experience* or finite section thereof (understanding by a finite section of Experience the whole intervening Experience between two "distant" moments). Permanent space thus appears as the space of an imaginary moment which the mind has allowed to become, as it were, petrified in thought, by preserving from given successive moments only those relations which remain unchanged in these moments. This space, or the imaginary moment which it represents, the mind carries over from moment to moment, compares it with momentary spaces, and in the spatial ordering of these moments notes its deviations with respect to permanent space.

When, therefore, we speak of two non-contemporaneous objects or events in space, it is simply an assertion of the fact, that we compare the position of these two events in their respective moments by means of corresponding positions in this petrified enduring moment, which we have unwittingly identified with each of the two moments.

38. In order that we may be able to distinguish between elements of real moments of experience and elements of this imaginary "enduring" moment, we call the latter elements *timeless points*. These will be imaginary elements of experience which will retain eternally the same spatial relations towards one another; in every momentary space which "underlies" them, one element of experience will correspond to (or coincide with) each point of permanent space, so that each timeless point will be a route of "instantaneous points".

38.1. A one-dimensional aggregate of timeless points of a given permanent space (a timeless line) will intersect each one of the moments belonging to it in an instantaneous line, a two-dimensional aggregate (a timeless surface) in an instantaneous surface, and a three-dimensional aggregate (a timeless body) in an instantaneous body. In the Experience belonging to this space a point will form a progressive figure of the first order, a timeless line a progressive figure of the second order, a timeless surface a progressive figure of the third order, and a timeless body a figure of the fourth order.

*Movement.*—39. It is only through the idea of permanent space that the ideas of "*rest and motion in space*" and the idea of "*matter*" acquire any meaning. In a moment everything is at rest; to speak of change of position in a moment is meaningless, since the position of a given event



in a given moment is the sum of its relations to the remaining parts of this moment and is given once for all. Matter also cannot be defined in momentary space. Only when we compare the ordering of two different moments by means of permanent space can we see that a group of elements of experience, which are distinguishable by the same characters, coincides in both moments with a certain group of points of the permanent space of these moments, while another group of elements, which coincided in the first moment with a group of timeless points A, coincides in the second moment with another group of timeless points B. That we express by saying that one particle, on which we fastened our attention, remained *at rest* and a second moved from position A to position B in the enduring space which we are using for our comparison. Motion is thus change of position in permanent space, and rest is absence of motion.

*Matter.*—40. A definition of motion is incomplete without a definition of the subject of motion, which is matter (in the broadest sense of the term); we will, therefore, briefly indicate here how a definition of matter can be arrived at.

Of a group of attributes, which can be identified in all the elements of any progressive continuous figure of elements of experience, we say that it persists or *endures*, and call it a *permanent group of attributes*.<sup>1</sup>

As we have already indicated above the mind is disposed, or compelled, to seek or form such enduring, unchanging characteristics of experience. If we call the progressive one-dimensional figure of elements of experience, which carries an enduring group of attributes, a *perceptual particle*—we can define a *material particle* as a *perceptual particle composed of impenetrable elements of experience*, where impenetrable elements of experience signify those elements of experience which cannot form a common ingredient of two different material particles.

#### A FEW CONCLUSIONS.

41. In the definition of space and time we have achieved the aim which we set up at the beginning of this essay, and

<sup>1</sup> This definition implies that we postulate the possibility of comparing attributes which are not co-momentary and identifying their "likenesses," in a sense purely qualitative and not quantitative. Even if there were no empirical grounds for this postulate, it would be perfectly legitimate; since without it thought itself, as well as science, would be impossible. Even if objects changed, which we imagine unaffected by time, it would not be the change which would matter so much as our collective judgment; a red patch of colour will be red as long as everyone calls it red, even though some higher being may see it as changing its colour with time.



at the same time we have laid broad foundations for the construction of a "natural geometry," or "geometry of experience," as we can now call physics. For its complete construction it would be necessary to supplement our inquiry by determining the properties of the relation of "interval"—the proper metrical relation—a task which, as we have already stated, will not be attempted in this essay. At this point it may, however, be useful to pause and enquire as to the relation of our definition to the views prevailing in contemporary physics, and as to the manner in which it solves the differences which arise out of the divergency of these views. I am purposely using the word *views*, and not definitions, because, as we noted at the beginning, we should vainly search for a satisfactory (useful) *definition* of space and time in text-books of physics; only with the greatest difficulty shall we find it in some text-books of logic and mathematics. Text-books of physics usually assume that definitions of these fundamental concepts belong to, and are given by, philosophy; philosophy, however, has given several answers, the majority of which, besides being of no use for physics, to the latter's great misfortune also contradict one another: and physics only inherits the controversies arising out of these philosophical—or better, metaphysical—divergencies, as we can easily see in the controversy raging around the Einstein theory of relativity, or the Planck theory of quanta. The basis of these controversies, and the motive of the passionate opposition which they encounter in certain circles, does not lie in the disagreement of these theories with physical facts, but in their disagreement with the metaphysical preconceptions of their opponents; it is only a repetition of history, for from the same motives there arose the opposition to the Newton theory of gravitation, to the principle of conservation of energy, and to other principles now generally recognised. Besides the fact that the controversy is to a considerable extent a controversy about the aim and nature of physical theory in general—a point which we can only mention here in passing—its source in my opinion is a *noetical*, and not a physical, disagreement of the disputing parties as to the nature of space and time, a disagreement rendered considerably more acute by some of the philosophical expositors of the new theories.

42. In rough outline, the current conceptions of space and time, in so far as they are at all important for physics, may be placed in two classes, parallel with whose lines of division runs also the line distinguishing the followers of the new theories from their opponents. A good, though not an

exhaustive (as will be seen in our own case) criterion of a concept of space and time belonging to the first or the second class, is the answer to the question whether physical space (and time) can or cannot be deformed, *i.e.*, whether or not it is possible to find *physical* space in which different axioms hold for different places. The answer given by the first class—the Kantian idealists—is in the negative; space and time, they say, are “forms of our intuition,” independent of the external world, and pre-existing to all perception, and they can be only such as are given us; it is not possible for our intuition of the properties of space to be dependent upon our physical theories. The answer of the second class is in the positive: space is a physical fact, the properties of which can be ascertained (measured) by physical means: that is the attitude adopted by the empiricists, sensationalists and the whole of the Mach and Einstein school. Our own reply is that the question has no meaning, because space, according to our definition, can have as few physical or metrical properties as, for instance, the alphabetical order of the vowel-sounds; nevertheless, our point of view does not result in the rejection of the Einstein theory which, in my opinion, can be reconstructed on the basis of our conception of space and time in a manner more satisfactory from the noetic standpoint than the theory is at present. Within the space of the present essay we can only briefly justify our point of view.

43. The fundamental shortcoming of the idealistic point of view,<sup>1</sup> and the cause of its failure lies in its complete irrelevance to the whole question: the decision as to the validity of the laws (postulates) of, *e.g.*, Euclidean or non-Euclidean geometry for physical experience does not depend upon the answer to the question whether this geometry is given us by intuition or by the external fact, but upon the answer to the question *what* this geometry—irrespective of the way it is given—is: the problem of the structure (metrical properties) of the space in which we place our physical experience remains unaffected whether this space be inside or outside the mind. It is for this reason that Kant's point of view as to the form of physical space cannot differ from that of Riemann or Einstein.

44. The second standpoint—the classical formulation of which we find in Riemann's “Habilitationsschrift”—starts

<sup>1</sup> I do not know whether of Kant himself; my criticisms are aimed at those Kantians who hold that geometry is determined by the *properties of space*, or, better, that geometrical postulates determine or express these properties, and that they, together with the intuition of space, are given us *a priori*.

from the assumption that space—an aggregate of points—is a physical entity, an actual object of perception, the properties of which can be examined by physical means, and which can be measured in a way similar to that in which we measure matter or energy, *i.e.*, as a quantity. My objection to this viewpoint is two-fold: In the first place it seems to me that space as conceived by this theory—in fact every conception of space as a quantity consisting of points, and for that reason also the current definition of space of pure geometry—degenerates into a logical circle and is therefore worthless as a definition—through failing to realise that nothing can be a relation and a relatum at the same time. As long as we do not define point independently of space, space defined as an aggregate of points becomes a relation between things (points) which in their turn are only relations between its different parts, *i.e.*, between themselves; pure geometry and many philosophers are clearly conscious of this circle.

Secondly, even if we assume that we can arrive at a definition of point (as a space relatum—that which is spatially related) independently of space, and that we can remove this logical circle, Einstein's space is, in so far as it remains a continuum of points, open to further objections:

(a) Either this continuum of points will be a thoroughly homogeneous one, and then it cannot be applied for the explanation of gravitation in Einstein's way; or,

(b) It will be heterogeneous and then it becomes impossible to distinguish space from its "contents," *i.e.*, from matter and perceptions; space then becomes a superfluous higher structure of Experience, because the only property by which, if defined as a continuum of points, it can be distinguished from matter, is its homogeneity. The space-time of Einstein is a kind of medium, which by its heterogeneity acquires the properties of matter, becoming superfluous if we wish to describe the phenomena in terms of matter, and useless, if we wish to describe them in terms of something else.

45. Assuming that we have defined "point" independently of space (*i.e.*, so that the definition of space is not presupposed in that of point) we have two possibilities open to us: either space is an aggregate of such points, or a relation between them. The followers of the sensationalist theory of space maintain that it is necessary to postulate points as the constituents of *empty* space: as those parts of space in which there is no matter. In dealing with this objection great caution is necessary: in substance it is a question whether empty space can be subject to physical, sense experience. Here, I think, the sensationalist theory of space

shares the error of Kant: empty space cannot be imagined, much less examined physically. But it is necessary to distinguish here clearly between the space (point-space) which in accordance with our nomenclature can be called *momentary*, (therefore an aggregate of points in a given moment), and the space, which in accordance with the conventional terminology we have called *permanent* space (therefore the aggregate of permanent points, *i.e.*, routes, consisting of points of the various momentary spaces). As far as the latter is concerned, the objection of its "undistinguishableness" from matter and therefore superfluosity comes into play in its full weight; if this space has different properties in its various parts, it will be possible to ascertain these properties only when something enters these parts (a particle of matter, energy, like a ray of light)—but how is it possible to distinguish a space which has an influence on what enters it from a material medium? If we reply that such a distinction is not necessary, and still adhere to the point-aggregate conception of space, we shall get another space in which this medium is placed, and in a similar way a whole hierarchy of spaces in an infinite regress.

46. In the case of a *momentary* space the conception of empty space loses its sense altogether: into an empty momentary space, *i.e.*, into a momentary space (point-aggregate) in which there is nothing, *nothing will ever come*, and it is therefore superfluous to maintain that the space is there, and that it has such and such (unascertainable) properties. The postulate of the existence of points of empty space has meaning in the pre-Einsteinian space of classical mechanics, where every eternal point is a *possible* recipient of a particle of matter; the moment, however, we amalgamate space and time into one continuum, as it is amalgamated in Einstein's theory, empty space becomes a superfluous multiplication of entities, a useless fiction, satisfying perhaps the requirements of aesthetics (not even transcendental) but not of logics and physics. Empty space, as empty time, is an empty word, with no meaning save that of a *possibility* of ordering relations: if we say that between the particle A and the particle B there is an empty space, it means that there exists the possibility of placing a particle X between them; evidently it has a meaning only in the case of permanent space.

47. Convincing ourselves that the concept of space as an aggregate of points is untenable, we are reduced to the solution, developed in the preceding paragraphs: space and time is a *relation* between things, *i.e.*, between parts of the contents

of our mind; the difference between them being, that while time is an abstraction of the whole—perceptual and non-perceptual—content of the mind, space is an abstraction from the first only, from the events, from Experience. The definition of this relation is given by its being the *only* relation, common to *all and any* two parts of this content. Space and time as such are not subjects of physical experience, they are pure concepts, abstractions from experience; therefore they have no physical properties, properties which it would be possible to examine and determine by physical means. Properties which can be determined and measured by physical means are not properties of space and time, but of that which is “*in*” space and time (which means, according to our definition, that which is arranged in spatio-temporal order)—*i.e.*, of Experience. It is, therefore, meaningless to speak about the “measurement” of space and time, still less about their metrical properties: what we are doing when we “measure” space (or time) is (assuming for the moment that we know what we mean by the word measurement)—measuring *Experience*, having regard only to its order in respect of space (or alternatively time), and leaving aside its order of time (or alternatively space).

47.1. At this point it is necessary to remark that order itself is not the only relation which it would be possible to call spatial or temporal, *i.e.*, which would be common to all parts of Experience; the second relation of this kind—as long as we have not analysed Experience into its elements—is extension. Extension is so often considered to be the property defining space and time that it is necessary briefly to justify our choice of order as the space—and time—defining relation. The reasons by which we were led in our choice are roughly these: in the first place, extension is a characteristic of Experience as a whole, but loses all meaning when we think of Experience as analysed into (unextended) elements, and here the relation of order is at a great advantage. Secondly, extension as a pure space and time characteristic appears in the Geometry of Experience when we introduce the relation of interval between two elements, and it can be considered to be only another facet of the same relation of which one facet is order: this being understood, we can finally say that we were led by the same reasoning which compels us to consider *analysis situs* to be a more fundamental branch of geometry than metric geometry. That, of course, may be a matter of opinion: I do not doubt that it is possible to proceed in the contrary direction and arrive at results equally fundamental.

47.2. The theory of space and time which we have thus reached is, of course, not complete; for completeness there is lacking a discussion of this second spatial and temporal (formative) relation of extension, or better, (to distinguish from the use of the term extension in the sense defined at the beginning of this essay) space and time *magnitude*, depending on the concept of distance and forming the basis of measurement and metric discussion upon which we have touched above in passing, but which is not to form a part of the present essay; we hope to devote to it a new study to which the present will form, as it were, an introduction. The method which must be followed in this development we shall indicate in the remaining few paragraphs.

48. It may appear that the conclusions reached in the above paragraphs are of little value, since they are valid for the time and space of a single mind, whereas different minds may arrive at a different ordering of the elements of their Experience, and thus render impossible any conclusions as to the space and time of the external world, which may be entirely different from the space and time of individual Experiences. That is, I think, an error arising from the mistaken judgment that the external world is given as an unordered aggregate of elements of Experience which individual minds first reduce to order, thus creating the space and time of their Experience. In reality the process is the reverse; the external world is given to minds as a whole, a coherent and connected structure of events, in which individual minds first seek out elements of Experience and their ordering; and whatever the metaphysical character of the external world—whether it is the work of some transcendent being acting upon a mind of the same structure, or whether it is some common creation of the human subconsciousness—the “Form” of the world is already there when it is presented to us in perception. Since, then, we have defined the external world as that part of the perceptual content of the mind which is common to all minds, and since the uniform ordering of its elements in every experience is the fundamental condition upon which part of Experience can be held in common by different minds (if the elements of Experience only, but not their ordering, were common to different minds, it would be impossible to decide whether anything was common to them *at all*), we can affirm as an axiom the principle, that the *Form* of Experience will be common to all minds and therefore a property of the external world independent of the individual mind; from this we can affirm *a priori* that two observers will agree in their “situational” description of phenomena (that is, a description which is

content with determining the order and position of given elements in the sense of an *analysis situs*). But that is also *all* that can be said *a priori*; whether two observers will coincide in their judgment as to the simultaneity of two elements of Experience must for the time being remain an open question. We must not forget, too, that we have hitherto paid no attention to the metrical properties of a physical continuum and we cannot *a priori* preclude the possibility of difference in this direction without offending against the methodological principle of economy in hypotheses, and unduly circumscribing possibilities which are in no way at variance with the laws of our thought.

49. But even here we must not go too much to extremes; the metrical part of our study, which we have deferred to a later work, and which is of the greatest importance for physics, lies in investigating the relation of "interval" (distance) between two elements of a given continuum; this relation in a multidimensional continuum is a certain mathematical function of its components, which we will call "distances," and which enable us uniquely to denote individual elements by co-ordinates already having more than a descriptive function. It would, indeed, be meaningless to affirm that we are free to premise that the interval between two elements will be different for two observers: an interval is an interval, that is, something in the given continuum, and though different observers may call it by different names, their speaking of it in different ways does not alter it. We may state this fact in different words, or, if we wish, lay it down as a postulate, saying that the *total* interval between any two elements of Experience is independent of, or invariant with respect to, the observer. It is otherwise with the partial "distances": all that is required in their case is that a certain function of them, including them all, should produce the same total interval. Here the main problem will be whether there is in a single Experience something (a structure) which directly determines these partial "distances," or whether it is left to the observer to determine them (in our case spatially and temporally) as well as he can. In reality it appears that this freedom is left to the observer, or, properly speaking, imposed upon him; and upon this freedom depend those differences in estimating the spatial and temporal lengths which appear so paradoxical in the theory of Relativity. Even this freedom, however, I maintain, is not absolute, being limited by the principle, which I call the *principle of maximum uniformity*, and which requires space-time distances to be so determined as to permit, in relation to one another, of the *most uniform possible* description of Experience.



*The Law of Motion.*—50. As we have already gone thus far, we will venture upon a further digression which will enable us to formulate the most important law of physics, the law of motion of a free body. By the attribute *free* we denote a body or material particle which does not (or *in so far as it does not*) meet any other material particle in its course. Given any two non-contemporaneous elements of experience forming this particle, the law of motion has to determine the remaining elements of Experience forming it. In current terminology, given any two points in the course of a material point, the law of motion has to determine the remaining points of this course. What will this course be? Can it be determined *a priori*? I believe it can, if we exclude the possible intervention of some unknown power (*e.g.*, so-called *force*). It is found by the following process of reasoning: There is an infinite number of possible paths by which two elements of Experience may be joined, and the course which a particle of matter chooses must itself afford the ground for its choice. There must be something in this course which distinguishes it from all other possible courses, otherwise there would be no *a priori* reason why it did not choose one of the remaining courses. What property can we find in this course to distinguish it from all other possible ones? A clue is afforded us in this direction by the fact of the multiplicity of observers; a course is a course, *i.e.*, a something, some condition of the "external world," which has no reference to who observes it, and must be the same for all. Its affinity with the interval between two elements of experience is evident; and we shall find that what distinguishes one material particle from others (one path connecting two points from other possible paths) is the interval between its various elements, and that the path which a free material point will take, is determined by the interval between any two of its elements.

If we reverse the sequence of our reasoning and postulate the length of the course of a free body as the measure of the distance between two elements of Experience, we have introduced into the physical continuum a geometry, in which a straight line (a geodetic line) is defined by the course of a free material particle, that is, where the simplest law of motion to which we can attain ("a free material particle moves in a geodetic line") is at the same time a determinant of the metrical properties of Experience, which will make the geometry of our continuum the simplest.

*Physics and Geometry.*—51. At this point it will not be inappropriate to touch upon the relation of physics to geometry—a question which has given rise to so many violent controversies in the past forty years. In the first place, it will be



necessary to make clear to ourselves the definition of geometry as it will appear if we accept the standpoint of the above investigations and the definition of space and time arising from them: geometry will no longer be a "science of the properties of space" as it is usually defined, but a "science of the properties of ordered aggregates, or continua". These continua will possess different (metrical) properties depending upon the way they are ordered and upon the way we define "interval" in them—upon the postulates we lay down in the foundations of our geometry.

One of such continua is our perceptual Experience: it is the investigation of its properties which is the task of physics. Between physics and geometry there is only this difference: that in geometry we can *give* orders up to a certain limit, *i.e.*, as far as we are not offending against internal consistency, whereas in physics we must *obey* orders.

We say that geometry is *a priori*, deductive, physics *a posteriori*, inductive, founded on experimental knowledge; the truth seems to be that both sciences are to a certain extent inductive, based on experience, from which they generalise, abstract, and to a certain extent deductive, building on concepts and postulates obtained by generalisation. The difference between geometry and physics (I speak of course only of theoretical physics) is therefore not, as generally assumed, so great as regards their material: both deal with concepts, *i.e.*, abstractions, generalisations from experience: <sup>1</sup> the difference between them being, that geometry can do with its concepts whatever it pleases, as long as it remains consistent with itself, while physics must strive to arrive at conclusions which agree with physical experience, to make its concepts correspond to certain physical experience.

Finally, geometry once more approaches physics when, to facilitate its work, it borrows from physics its aids: the perceptual *representation* of its concepts; but here must be kept in mind that this representation is but an *approximation* to the ideal concepts of geometry, just as (if I may be allowed to present the fact of physical simplification of phenomena in this reverse order) actual empirical physical experience is but a rough approximation to the ideal Experience of physical theory.

<sup>1</sup> With due apologies to those who define geometry as a purely formal branch of logic, having nothing to do with the so-called geometrical "intuition" of lines, points, etc., but with pure hypothetical judgments: "If we assume A, then B follows". If we admit this definition of geometry, why differentiate geometry from other branches of pure mathematics? For our present purpose we shall prefer to think of geometry as the science of points, lines, angles, etc.

## II.—SUGGESTIONS FROM AESTHETICS FOR THE METAPHYSIC OF QUALITY (III.).

By P. LEON.

### *Argument Resumed.*

WE may now resume. Knowledge has two aspects, that of judgment and that of the æsthetic apprehension. In judgment are present the distinctions between the "that" and the "what," between subject and object, between appearance and reality; in the æsthetic apprehension none of these distinctions is present. Judgment is knowledge of any entity that can be characterised as a subject of attributes; it is knowledge of "things" and their relations, of organisms, persons, etc., of universals, of relational entities or entities involving relations; it is perception, science, history and, perhaps, philosophy. The æsthetic apprehension is knowledge of qualities, secondary qualities or æsthetic wholes, non-relational individuals which are universes; it is elaborated in art. Neither aspect is prior to the other; neither presupposes the other, or rather each presupposes the other. Neither is independent; each as the main import of a situation subsumes the other as its subsidiary aspect or element, which as subsidiary loses the character it bears when it is itself uppermost. Thus judgment subsumes into itself some apprehension of quality, *e.g.*, of the secondary qualities in perception, of more free and unattached quality in emotion; the æsthetic apprehension on the other hand subsumes judgment into itself in the way in which the Agamemnon of Æschylus contains precipitated a theology, or as a novel of Hardy's may hold in itself the philosophy of Schopenhauer. Above all, neither aspect can conflict with or replace the other. Thus the æsthetic apprehension or what may be conceived as identical with it as here described, the mystical intuition, may give us knowledge of deity, if deity is a quality on a metaphysical level with green or red or an æsthetic whole; but it cannot give us the knowledge that "God created heaven and earth;" for that judgment is not mere apprehension of quality, just as

the judgment "this is green" or "this is a green" is not knowledge of a unique quality "this green". On the other hand the judgment "God created heaven and earth" would not do the same work as the mystical intuition; for it would be knowledge, not of deity, but of the creation of heaven and earth; just so, the judgment "this is a green" or "this is a poem" would be knowledge of the universal "green" or of the universal "poetry"; for in such cases, as we have said, the predicate is the real subject.

Feeling or emotion, at any rate as a convenient receptacle for unsolved problems and as a temptation to bring about an irresolvable duality in the universe, we have for ourselves done away with. It might indeed be objected that we have only done away with it, by assigning to the æsthetic apprehension and to qualities the rôle ordinarily given to feeling or immediate experience. We have done that; but that is not a criminal thing to do; on the contrary it may be very useful. For, feeling and immediate experience generally cover a good many things beside what we have called qualities and the æsthetic apprehension; and that is just the trouble. Also, both feeling and immediate experience are often mere terms of refuge, whereas qualities and the æsthetic apprehension, or knowledge which is not judgment, we have sufficiently described and illustrated for any fallacies that may be involved in my argument to be patent to anyone, except of course myself at the present moment.

What we apprehend æsthetically or what we know in knowledge which is not judgment, are, we have said, entities of a special kind, qualities: the so-called secondary qualities, or more precisely, this apprehended green, red, sweet, bitter-sweet, cold-white, sweet sound, glittering sharp; serenity, calm, sombreness, mystery, weirdness, splendour, pathos, tragedy; or more precisely, the luscious freshness apprehended through certain words of Homer, the silvery ethereality apprehended through Wordsworth's words, the unique quality apprehended by means of the Agamemnon, a gorgeous gloom and splendour, that contemplated by the help of the Oedipus Tyrannus, a serene and tranquil horror; in short, æsthetic wholes. All these are non-relational individuals, independent universes. We assign to them all the same metaphysical standing; of all, we say that it is no explanation to state that the apprehension creates them; creation as an explanatory term we would avoid even in the case of the artist's own apprehension. Our position, or method at any rate, is thus that of extreme realism, in a certain sense; if in the end it turns out to be almost identical with extreme idealism, that

will not be through any lack on our part of good will to be realists.

*The Reality of Æsthetic Wholes.*

It will be seen that I am assigning to æsthetic wholes a more uncompromising and unambiguous reality than is generally accorded to them. What art reveals to us is most often called real from mysticism, love or respect, rarely from philosophic conviction. It is suspected to be real only by poetic licence or else it is revered as a hyper-uranian, not sublunary, real. This is no doubt largely due to fixing on the subsidiary aspect of representation and taking it as the final import. If we do this, we seem to be confronted with what pretends to be a history but yet is no history or no history of anything actual, with a world of men and things which yet is not such a world. We then start a metaphysical problem as to the reality of this world. But metaphysic should take over problems from Æsthetic only when the latter has made clear what is the real import of a work of art. That import is not the presentation of an apparent world of men and things, but the making manifest of quality; to what is more or less vaguely called the work of art, and to all its own subsidiary aspects, that import may be conceived to stand in the same relation in which the apprehension of the laws of motion through a book of science stands to the print, the metaphors and the exposition.

The question for metaphysic, must then be about this quality. If its reality is not ambiguous, where is this quality? for example, the gorgeous gloom I apprehend with the help of the Agamemnon? to what does it belong, what "local habitation" has it? We have said that it has none and that it does not belong to anything. Returning now to the secondary qualities we must ask, has even a secondary quality any "local habitation"?

*Do Secondary Qualities Belong to Things?*

Secondary qualities, we have said, are timeless in the sense that they do not change, they do not do or suffer anything. Are they spatial? It is difficult to think of a sound, of a sweet taste or of a scent as spatial entities. But it is not so difficult with regard to colours and what may be called tactile qualities. But of the suggestion of space by these we may say that all it comes to is that in apprehending them, we also apprehend space; and I think I am following Prof. Alexander in saying that the apprehension of space is dis-

tinguishable from the apprehension of the qualities. It would not be going much further to say that the qualities themselves are not spatial. At any rate a colour is not solid like a thing; it does not occupy three-dimensional space. If qualities are, then, both timeless and non-spatial, they are then utterly non-relational; for time and space are thought either to be or to involve relations. But qualities, though not spatial themselves, may belong to things which are spatial; they may be entities like a thing's action which, though not solid like the thing itself, nevertheless belongs to such a thing. We must ask, then, whether even secondary qualities belong to anything, whether spatial or not.

Perhaps it is better to put the question the other way round. Can that which belongs to anything or is the attribute of anything be a quality, like red or green or sweet? The attribute of anything, like the thing itself, is generally thought of as a "continuant," as an identity persisting through change; thus what is called the colour of this rose is said to change. But a quality, we have seen, cannot change, cannot be such a continuant; for it does not consist of parts so that some parts may remain the same while others change; if I apprehend now a light red, now a dark red, I apprehend two similar qualities but not one quality which changes. Again, when, in licking a piece of sugar, I apprehend this sweet taste, I can conceive of some property or attribute in the sugar which persists through change and in virtue of which I may later apprehend a quality similar to the present, but I cannot conceive that property or attribute to be the present apprehended sweet, or it plus something more, or anything like it or metaphysically of the same standing as it. If we seek to speak more exactly, we might be inclined to say that it is not the quality colour or sweet which changes and persists but the thing itself or some property in it; and that in virtue of this change in the property or itself, or in virtue of its standing in different relations, the thing has now this, now that apprehended quality. But such momentary ownership would at least be a very dubious "having".

Generally, this now apprehended quality, that now apprehended quality, would be considered not to belong to the thing itself but to be its appearances or the various ways in which it appears under different conditions, at different times, to different persons. The thing itself, *e.g.*, the rose, is supposed to have a continuant quality, a definite red; but it is admitted that each time I look at it, I apprehend a different red; the different reds are said to be merely different ways

in which it appears. But is that continuant itself quality in the same way as the appearances are? In laying down that what underlies these appearances is itself a quality, a red, I should be doing one of two arbitrary things: I should either arbitrarily select one red, itself appearing and under conditions, and attribute that to the rose, eliminating the others, or else by denying that it can be known in the same way as the appearances, I should have to maintain quite arbitrarily that what belongs to the rose is indeed a quality, a red, but one which I can never know. For, being a quality, it could only be known in one way, as appearance; and as appearance it could not claim pre-eminence over the other appearances. Ordinarily, that is in cases other than of quality, when we distinguish between what a thing is and what it appears, we imply that what it is can be known and must be known other than as appearance. Thus when, for example, I say that certain lines look or appear convergent but are really parallel, then that which I am attributing to the lines, their real parallelity, whether that be understood as their never meeting or as something else—that real parallelity is not another appearance, another thing which the lines “look,” and which is given arbitrary preference over other appearances; it need not be apparent at all; it is something intelligible. Qualities, however, it will be admitted can only appear (whatever be meant by appearing) and are not also intelligible. So that with regard to them, we cannot do what is done in the theory considered, namely make the distinction between appearance and something else.

There are thus difficulties in the way of regarding the attribute or property of anything as a quality. We must say that the property in the rose, which is usually called its colour, is to be considered as an identical point of reference for many similar reds and is not itself a red or a quality. We should not be thus setting up a mysterious thing-in-itself; we are merely maintaining that an identical point of reference for many colours is not itself a quality nor known in the same way as a quality. A universal also is not a quality nor known in the same way as a quality; yet it is not mysterious.

What applies to the property of a thing applies to the property of any entity, so that if a mind also is considered a subject of attributes, then these attributes also cannot be qualities whether secondary or not. If we decide that qualities, both secondary and other, do not belong to things, we are also deciding that they do not belong to minds.

Starting now our question from the secondary qualities

themselves, we ask : do they present themselves to common-sense or superficial inspection as belonging to, or being part of, or residing in anything? With the exception of colour and tactile qualities, they do not. For, as soon as we ask what they belong to, we find it difficult to decide whether a sound belongs to the ear, or the strings, or the air ; a scent to the rose, the atmosphere, or the nostrils ; heat to our bodies or the fire ; sweetness to the sugar or the tongue or palate ; and when the inspection becomes more sophisticated, the mind is put up as a third claimant to ownership. We can best do justice both to common sense and to philosophical controversies, by deciding that secondary qualities do not belong to, or form part of, or reside in anything, neither space, nor a physical thing, nor a mind. They just are.

We might, however, be inclined to say that they are caused by something, by the thing which is generally supposed to own them. But this would be inconsistent with our previous decision. For if they are caused, they must be effects and effects in something ; that is they must belong to something and we have said that they do not belong to anything. The notion of causal connexion does however suggest something useful. The cause assigned to a particular effect is generally a partial section of reality ; but it is recognised that this is no more than a useful and legitimate abstraction and that the real cause is the whole universe. It may be that the being of a secondary quality does involve all other entities ; if that is the case, we shall not be unwilling to admit that it involves not only the thing to which it is ordinarily attributed but also our sense organs, and our bodies, and even perhaps our minds.

The idea of causal connexion being barred, we shall have to be content with the more general notion of "involving". We can say that the being of this unique quality, *e.g.*, this apprehended red, involves firstly a thing, *e.g.*, the rose ; but it involves also the light ; for it is not, when there is no light. The rose and the light, on their part, involve, whether causally or otherwise, a multitude of other entities. In short, by the principle of continuity, I can say that the being of the single unique quality involves all other entities, therefore also my body and the bodies of others, the entity called my mind and the minds of others. The connexion of the quality with my sense organs, and therefore my body, is, however, nearer than is suggested by this ; it is practically as near as is its connexion with the rose or the light. This is brought out by all the facts generally adduced in psychologies ; it is admitted

by many realists and some even go so far as to state that the secondary qualities may belong to the percipient's body. But if my sense organs and their physiological functioning are admitted to be closely relevant to the being of the quality, we must admit also the near relevance of their inseparable psychological functioning, and therefore of my mind. If the relevance of both the sense-organs and of the mind to the being of the quality is denied by some realists, that is not because the facts easily permit such a denial, but because there is a fear lest, unless we make it, we should land ourselves in solipsism or the admission that the apprehension makes that which is apprehended. But even if we held that the secondary qualities were states of our bodies or of our minds, we could still hold that the apprehension did not make them; indeed we can hold that apprehension can be apprehension of itself without being the making of itself. Here, however, we are maintaining, not that a secondary quality belongs either to the body, or the sense-organs, or the mind, but that all these are especially necessary or contributory to its being. And certainly, to say that the principle of continuity justifies us in asserting that minds, along with all other entities, are involved by the being of a quality is not to advocate any solipsism; it is merely to advocate a truism.

We are using that principle quite generally. It does not deny the difference between near and remote connexions. In virtue of it, I can assert that the present state of financial instability is connected with the death of Socrates; but I can also say that such connexion is almost fantastically remote, whereas the connexion of the death of Socrates with the political events in Athens immediately preceding or following it is less remote. Therefore, I need not deny that the being of a quality apprehended in illusion or by the colour-blind is more nearly connected with sense-organs or a mind than that of a quality apprehended in ordinary perception, nor that the being of the quality apprehended by you involves your mind and your sense-organs more directly than it does mine. So I can, without doing violence to the principle of continuity, assert that the present apprehended scent belongs to the rose I hold in my hand and not to a flower which I see further off, meaning thereby that though the flower seen at a distance is along with other entities involved in the being of the scent, nevertheless, the rose is more immediately involved than the flower seen further off.



*A Secondary Quality is the Absolute or the Unity of all other Entities.*

Now how are we to describe the way in which the being of a quality "involves" other entities? If (limiting myself to more immediate connexions) I say that the being of this red involves the rose, the light, my retina, brain, and therefore my mind, I cannot mean that a bit of the red belongs to each of these, any more than I can mean that water belongs partly to oxygen and partly to hydrogen. Just as water is oxygen and hydrogen, so the quality must be these entities. It is the unity or synthesis or acme or flower of these. We saw at the beginning of the enquiry that the colour white could be analysed into all the colours, and any colour into billions of vibrations. We can now say that such an analysis is general, abstract, or incomplete. When the analysis of a unique quality, *e.g.*, this red apprehended by me, becomes more specific and more adequate it will point not merely to vibrations but also to the rose, my retina, brain and mind. We will still say what we said at the beginning, namely that these entities are reached by analysis only; in the synthesis or unity they are present only in such a way that they lose themselves in it; they are constitutive of it without prejudicing its oneness, without making it a plurality. But the principle of continuity will not allow my analysis to be arrested at the rose, my retina, brain and mind. I must go on to include all other entities, other bodies and other minds. A single quality, I may therefore say, is the unity, acme or flower of the universe; it is the universe as unity.

For this conclusion we have been prepared by all that has been brought to light (or has it been invented?) about qualities, in the course of the enquiry. A quality does not belong to any particular section of reality, whether that be called a mind or a physical object, because all entities in a sense belong to it; it does not reside, it is not immanent in, any particular, because all particulars in a sense reside and are immanent in it. It is neither temporal nor spatial because it is the unity of the universe and the universe includes time and space within itself but is not itself in time or space. It neither acts nor suffers because the universe holds all action and all suffering in it but itself neither acts nor suffers. It is not bad or good because good and evil are both in the universe but are not predicable of it. It does not enter into relations, because the universe is the unity of all relations but is not itself related to another. No predication or judgment is possible of it, because all predicates are in but not of the universe.

It can only be characterised, as it has been characterised here and as the universe generally is characterised, negatively; we can deny the applicability to it of finite categories, *e.g.*, time and space, good and bad; this amounts to a denial of the possibility of predicating about it. It is, however, known and known completely, as a whole, in the æsthetic apprehension or knowledge which is not judgment. Thus known, it does not present the distinctions between the "that" and the "what," subject and object, appearance and reality, because being the universe it is the unity or fusion of the "that and the what," subject and object, appearance and reality. Besides knowing it as itself, as unity, we can also analyse it into particular constituents, vibrations, relations, physical objects, or minds, etc.: in this we have knowledge which is judgment or knowledge of sections of reality. Finally, a quality presents itself to direct inspection, as a complete, self-subsistent individual or universe because it is the universe. A quality is, in short, the Absolute.

*What is the Apprehension of the Quality?*

What now becomes of apprehension? Throughout the argument I have been maintaining that apprehension does not make that which is apprehended. But just now, I said that a quality being the universe as unity, is the fusion of subject and object. I maintain both statements. Also, early on in the enquiry, I said that the apprehension of a quality might turn out to be merely a subtlety, like self-identity. Such, I think, it shows itself. We need not, I said at the very beginning, assume for the strict purposes of the argument, that apprehension is the act of a mind; nor need we. A unique quality, this red, is the unity of the rose, the light, my body and brain and also my mind (if the latter is something additional to and different from the body and brain); these it involves more directly; but more remotely it also involves all other entities. In this way it will involve also the apprehension, whatever it is and to whatever it belongs, if it is a separate entity. But the apprehension will not make the quality; it may be constitutive of the latter only in the same way as are all other entities including the death of Socrates or the execution of the Czar of Russia. The apprehension does however seem to be more nearly involved than this in the being of the quality. But is it really a separate entity? Given *inter alia*, entities called physical objects, ether or air vibrations, sense organs, a brain active, and also a mind (if the latter is really different from the brain active), then these in synthesis constitute something which is neither a physical

object, nor vibrations nor a brain or mind, but a quality, a colour or sound, which as quality is essentially a manifestation, *i.e.*, it is manifest. To say that it is apprehended is merely to say that it is manifest or that it is itself. The apprehension of it is, then, like its self-identity, a subtlety. If the apprehension is the quality itself, then of course it cannot be said to create it, unless we wish to say that the quality creates itself. A quality does not owe its being to its being apprehended since the latter is identical with the being of the quality. We can say of the quality not "*est quia percipitur*" but "*percipitur quia est*".

In our opinion then, to say of a quality that it is apprehended is the same as to say that it is; since it is, it cannot but be apprehended. But what is meant by saying that this quality is apprehended by *me*, and what can be meant by suggesting that a quality can be, and yet no one need apprehend it? A quality or, as we may now call it, a manifestation, is, as we have said, in each case the unity of all other entities. But some it involves more immediately than others. In each case the analysis will reveal a more immediately relevant situation, more directly constitutive of the quality. We may picture all entities as arranged in a kind of pyramid, with the immediately relevant situation as the apex and the quality or manifestation as the acme or flower of this. Now when my brain actively functioning (to leave out the perhaps unnecessary word "mind") is one of the entities forming the apex or the immediately relevant situation, I can say that the quality is apprehended by me or is manifest to me. When however my brain is near the base and yours is at the apex, there is a manifestation to you but not to me. I cannot suppose that, when my brain is not at the apex, the same quality or manifestation persists. For a quality, we have seen is not a continuant; it is a single manifestation, the acme of all entities in a special configuration; when the latter is changed or the immediately relevant situation is different, the manifestation or quality is also different. It may, however, be similar; I can suppose that there is a quality similar to the now apprehended red when some one else's brain and not mine is immediately concerned, just as I can suppose that to be the case, when the physical object immediately concerned is not a rose but something else. But to suggest that there may be something similar to what we know as apprehended quality, *e.g.*, heard sound, seen colour, without its being apprehended by anyone, is to suppose that there need be no brain, at any rate at the apex or amongst the entities constituting the immediately relevant

situation. But that we obviously can never know. Nor is it an hypothesis required or suggested by any facts. On the contrary the facts seem to be against it. We can also suppose that there may be colours without light, or physical objects to absorb or reflect it, being immediately concerned. But of what use would such an hypothesis be?

*Secondary Qualities are neither Mental nor Physical.*

We are, however, obviously not adopting any form of mentalism. We do not say that qualities are affections, modifications or parts of mind, modes of consciousness, or experience. On the contrary, we need not use the word "mind," or at any rate we need not know what it means; we can quite conveniently use behaviourist terms and we have just done so; we can speak of a brain actively functioning. It might indeed seem, that in analysing a quality or manifestation like "cold whiteness" or "glittering sharpness," we must speak of a mind, because we must speak of "association"; but the latter term, vague enough in any case, is unnecessary. We can say that in the situation immediately constitutive of the manifestation "cold whiteness," there is present, as an element, a brain which was also present as an element in the situation immediately constitutive of the manifestation "cold". And we can speak of a brain resuming into itself its history just as we have spoken of a mind. But it is not our business here to say that there is no such thing as a "mind" or that it does not differ from the brain. Minds, whatever they are, are conceived as particular sections of reality. Therefore a quality cannot belong to a mind any more than it can belong to any other particular. A mind, along with other particular entities rather belongs to it, since the quality is the universe as unity. Moreover a mind is supposed to consist of "processes"; and a quality since it neither acts nor suffers, nor is itself action or passivity, cannot be a process. Qualities, therefore, whether "secondary" or other, are most decidedly not "mental"; nor are they "experience".

A quality, however, is not physical or matter either. For that is said to be physical which behaves according to the laws of physics. But a quality does not behave at all, since it neither acts nor can be acted on. It is not for nothing that science does not pretend to deal with qualities. Herein also, that is, in being neither mental nor physical, a quality proves itself to be the universe; for if mind and matter are only sections of reality, then the whole or the universe cannot be either.

*Mere Secondary Qualities are Abstractions.*

Because æsthetic wholes, being unattached or floating qualities, might appear to have but an ambiguous reality, we have been led to ask whether a quality can be anything but floating. We have seen that a secondary quality even cannot belong to any particular because it is itself the unity of the universe; it is the universe, the whole or the Absolute. Being this, nothing can be predicated of it, since all predicates are finite, and our examination of it has consisted in a rejection of such suggested predicates. But changeless, serene, calm, immobile like a Platonic idea (may the shades of Plato forgive us!), Stoic in its *ἀπαθεία* and *ἀταραξία*, a quality might certainly be called beautiful. And beautiful is, indeed, a predicate applicable to a quality or the universe. But that is merely because to say that a quality or the universe is beautiful, is to say that it is itself or to make an identical judgment. For the universe or quality, being quality, is manifestation, it is apprehended, *αἰσθητόν* or æsthetic; the beautiful or beauty is just manifestation, or manifested quality, or simply quality or the universe.

This brings us back to our Æsthetics. We have dealt with secondary qualities, firstly because the subject-matter of Æsthetics is really bound up intimately with the secondary, or what are sometimes called "sense," qualities; (this is implied in the saying that beauty is sensuous); secondly because in doing so we have been saved on the one hand from sinking in the Serbonian bog of "feeling" and on the other hand from soaring straightway into the empyrean of the Absolute. If the Absolute does await us at the end, ineluctable and unescapable, let us at least journey to it by recognised terra firma paths which all can follow and by good pedestrianism. But is not our pedestrianism a little ridiculous? Is it not ridiculous to say that a sound or a colour or a scent is the Absolute? To this we may now answer that in pointing to secondary qualities we have been pointing to what are in a sense fictions and abstractions. I do not mean that there is no quality which is a sound, a colour or a scent, but I do mean that there is no quality which is *merely* a sound, a colour or a scent, which is not also mystery, or serenity, or weirdness, no sound which is not to a certain extent what sound is in music, no colour which is not what colour is to the artist. If you urge that common sense does find such meagre qualities, then, I think, you are doing a great injustice to common sense, and in any case there is no reason why manifestation or quality should be given pre-eminently to

common sense, any more than is metaphysical truth. Quality is manifest *par excellence* to the artist and it is to art that we must go for manifestation. A quality is always an æsthetic whole.

*Necessity of the Theory for Æsthetics.*

Now æsthetic wholes do not merely suggest the above Metaphysic; they really necessitate it. We have been forced to speak in anticipation of an æsthetic whole as being a quality impregnated with the universe. We have seen how Walter Pater speaks of the Monna Lisa as holding in it "all thoughts and experience of the world" and of "all the motives, all the interests and effects of a long history condensing themselves into a mere gesture, look, or smile". The same fact is indicated by Ruskin when he says that Tintoret gives "to a shadow, meaning and oracular voice". We have seen how, when great men, with æsthetic experience enormously superior to our own and not vitiated by any philosophical theorising, attempt to attach a quality, which is an æsthetic whole, to any particular section of reality, their language indicates, especially in the case of music, that they conceive of the quality as residing in the particular, like some immanent yet transcendent spirit. Such a conception is not easily intelligible. The conclusion we have reached is, that the quality is the acme or flower of all other entities or of the universe, that it is, in fact, the Absolute, and that therefore, all particulars are immanent in it. Now of an æsthetic whole, it is not really absurd to say that it is the Absolute. It does seem to perform the task usually assigned to the Absolute. For example, without being itself true or false, it includes in itself both truth and error, in the way in which the Agamemnon of Æschylus, besides many truths, contains also an erroneous philosophy about the gods or about the destiny of man, or in the way in which Milton's poetry, along with much that is true, contains also an erroneous astronomy and an erroneous theology. Without being itself good or evil, an æsthetic whole does subsume into itself both good and evil in the way in which the Monna Lisa, beside "the mysticism of the middle age with its spiritual ambition and imaginative loves," includes also "the lust of Rome" and "the sins of the Borgias". If my language may have sounded unconvincing while I have been pointing to "secondary qualities," philosophers of all schools do admit that an æsthetic whole is the fusion or unity of the "that" and the "what," of subject and object, appearance and reality, and that is what the Absolute is supposed to be. To show how

an æsthetic whole is this, has been the purport of the whole of this tedious argument.

The theory that quality or an æsthetic whole is the acme or unity of all other entities or that it is the Absolute, enables us, moreover, to do justice to all partial truths about art and beauty. We can even see what justification there is for treating poets as liars and driving them out of the Republic: poetry does subsume into itself both error and truth indifferently. We can see also the justification for the disapproval which abstract moralists have pronounced in all ages either on some or on all art. An æsthetic whole is the flower of evil or immorality as well as of good and of all other entities. By the æsthetically crude, art may be used as a moral text but it may also be used as the Devil's scripture; for the young or the artistically defective it may be an incitement to evil as well as to good. For the æsthetically *σώφρων*, or the man of taste, it is, however, neither. He appreciates art not abstractly, but for what it gives as art, quality, which he finds neither moral nor immoral, and he rightly despises any other treatment of it as "philistine". We can do justice now even to the *Einfühlung* theory and to all æsthetics of feeling. If the æsthetic whole takes into itself all entities, then it takes us into itself also; we can say that it engrosses, absorbs, engulfs us, that we live in it, disport ourselves in it. Such is the language of *Einfühlung* and such is the language we have used ourselves. If anything is denoted by "feeling," that too will be an entity entering into the æsthetic whole; only, the æsthetic whole cannot be feeling, any more than it can be any other of its constituent particulars. We can now also see what is meant by saying that a piece of music gives us or is the quality or the spirit of the English people; we mean that, in the analysis of the special æsthetic whole, whatever is denoted by the phrase "the spirit or quality of the English people," will be found to constitute largely the immediately relevant situation. It is also plain, however, why the æsthetic whole should also appear to transcend "the spirit of the English people"; for the latter, however large it may loom in the analysis, will be found to be but one element along with all the other entities constituting the æsthetic whole. Finally we have for ourselves gained some insight into the meaning of the great saying that "beauty is spirit manifest through sense" or the spiritual appearing through the sensuous, a great saying which has often degenerated into the dreary doctrine of the "symbolism" of nature; "things" or natural phenomena are supposed to "symbolise" our thoughts and



feelings and to be "spiritual" in this way; an arbitrary emphasis is placed on a partial aspect of metaphor, whereby it is made out that the poet always speaks of inanimate material things as endowed with life, thought and feeling, and it is forgotten that the poet quite as often and quite as obdurately speaks of thoughts and feelings as material, of "winged thoughts" and "heavy feelings," and that this would justify us in saying that our thoughts and feelings "symbolise" matter. This points to a fault in the great saying: its words, though that may be unintentional, suggest that the spiritual or what is manifest is mind, *i.e.*, thoughts and feelings, and that sense is something separate and an accidental medium. For us, beauty, or an æsthetic whole, is the universe or Absolute, or the acme of all entities, and "sense" is the whole, not something different from it.

*An Æsthetic Whole is not Mental.*

This brings us back to one point, which may have been made out plausibly enough when I pointed to the secondary qualities, but which will sound more doubtful in the case of an æsthetic whole. Many will admit readily that a sound or a colour is neither mental nor physical. But, whereas in the case of a sound or colour many realists would deny that a mind or a brain is necessary to its being, when it comes to an æsthetic whole, far from denying the necessity of a mind or a brain, the naïvest of realists even would insist that the æsthetic whole is mind or mental. Of course a mind or a brain is necessary to the being of an æsthetic whole just as it is to the being of a sound or colour which are not really different from æsthetic wholes. There may perhaps be a physical mountain without the help of a brain or mind; but there cannot be an æsthetic whole called "a sublime mountain" without a brain or a mind, and a picture without a mind is merely so much matter (not even mere colour, in my opinion). But in this I would go further than realists in the denial of mentalism: the brain or mind is necessary to an æsthetic whole only in the same way as to a colour or sound. The æsthetic whole itself cannot be called mind or mental. How can it? If the æsthetic whole is the synthesis, unity or acme of, *inter alia*, my mind on the one hand and the mountain on the other, and if mind is one thing contrasted with the other thing the mountain, which I call matter or physical, then how can the unity of these two be mind rather than matter? Again, there cannot of course be music without some mind listening and listening appropriately, *i.e.*, musically; if mine is the mind, then my mind is relevant to the



manifestation or being of the quality I call a piece of music. But I obviously do not create the music and it would be impertinent to speak of a great æsthetic whole as being part of my mind, or of any one's mind; rather it seems to engulf and swallow up my mind which becomes part of it. But even as part of the music, it is not all that I call my mind that is directly relevant to it, *e.g.*, not my personal worries or my philosophising; these have to be away, not at the apex but right at the base of the pyramid. Similarly, a play of Sophocles would be merely a collection of hieroglyphics and not an æsthetic whole, if neither I nor any one else knew Greek; but here too, even as a mere element amongst many necessary to the manifestation of the æsthetic whole, if knowledge of Greek constitutes what I call my mind, that part of my mind is relevant, but all of it that is distinctively modern is irrelevant.

The æsthetic whole is then never part of the minds of the listeners or spectators though these may be parts of it. But what of the artist? Did he not create the æsthetic whole? Is not all art poesy or creation, and creation by mind; and is not that which is created by mind, itself mind also? The artist does of course create or invent, in a sense, but not really more than does the scientist or philosopher. Einstein created or invented his theory of Relativity but what he reveals is the constitution of Space, and Einstein has not created that. Hegel created his philosophy but it reveals the constitution of the Universe and this has not been created by Hegel. So, no doubt, Sophocles created his tragedies, but the quality or the Universe they reveal is not the creation of Sophocles.

This however, does not dispose of the matter. When speaking of a manifestation or quality, "romantic charm," I said that a complete analysis of it would entail an impossible history of everything, above all a history of the Romantic movement. I spoke of an act of apprehension resuming the history of civilisation in the way in which my appropriate response to a Greek phrase resumes at least the history of the revival of Greek learning; I said that that, however, need not mean awareness of that which constitutes the history; I need know very little about the revival of Greek learning. So we said that Walter Pater's analysis of the *Monna Lisa*, even if it is right, does not imply that Leonardo da Vinci thought of or was aware of "the animalism of Greece, the lust of Rome, the mysticism of the middle age," etc. It is enough that he should have been continuous with a reality in which these entities are; such continuity is

indicated by phrases like "influences," "tradition," "cultural environment"; and so we can speak of the *Monna Lisa* as being the acme of these as well as of other entities. But, it may be urged, this remarkable synthesis, though not knowledge, surely is or involves the work of mind? To the work involved we may perhaps do justice by some such description: when we speak of a quality or the Absolute as being the acme or the unity of particulars, we have to take into account time; some particulars are present, others past, or prior. Time does not kill anything and what is past does not vanish out of being or the universe, but is somehow continued, resumed or taken up into the present. That continuity or resumption may be called "mnemic," if we do not intend to denote by that word recollection or awareness but use it as we might use it for an act resulting from habit. If we take time into account, we may say, then, that a quality or the Absolute is mnemic or requires mnemic continuity; we may say also that such continuity requires minds and the latter may be regarded as mnemic storehouses or resting-places. As such a storehouse the artist's mind plays a great part, and thus we may do justice to all that is said about the artist's soul and his creativeness. All this, and, as far as I am concerned, anything else may be said about minds and their function in the universe. But one thing we must not say; we must not say that quality, the æsthetic whole, or the Absolute is itself mind. This it might now seem necessary to say owing to the great part history, tradition, cultural influences, are seen to play in the being of a manifestation, quality or æsthetic whole. Cultural influences, it might be urged, are constituted by minds; but that is not strictly true; they are constituted also by books, libraries, museums, which are things not minds. History also is not merely the record of the actions of minds; it takes into account also the actions of mountains and volcanoes. Lastly, we need have had nothing to do with minds and might have spoken of brains merely; for a brain may be described as a "mnemic storehouse" quite as conveniently as a mind.

But large words and phrases such as "history" "cultural influences" are more impressive than illuminating; they cover up but do not solve the problem. That and the danger which threatens us from the side of Idealism, we can best face by recurring to the simpler or abstract instance of a colour. The quality or manifestation "this red," has, I said, for its immediately relevant situation, the rose, the light and my brain or mind, or it is the unity of these as well as of

other entities. Now, it might be urged that the manifestation or quality "this red" is precisely experience or mind, that the unity or synthesis of which I speak, and which is certainly not chemical fusion or the unity of cause and effect, nor physical in any way, is the unity of experience, the synthetic unity of apperception. But if we say this, then we are using mind or experience not as a finite category; (for a quality we have seen to be the unity of all particular entities). We should, then, be consistent; we must not speak of mind as an element in this synthesis along with the rose, but only of the brain; we must not say that mind creates this synthesis or has it or is related to it; for mind would be it. We must not speak of "my mind," "your mind" but only of my or your brain; and if we want something to set alongside of, or against, the rose and the light, that something must be the brain and not the mind. Now mind or experience is of course used in Idealism as other than a finite category; hence the Absolute is said to be experience. But in this matter, idealists do not always deal quite fairly with us weaker brethren. Sometimes, they do use mind or experience as a finite category; they speak of *my* mind, *your* experience; they suggest that a mind has or creates the synthesis; that impression they certainly give to their opponents who otherwise would find nothing to oppose. It is never quite clear in what sense mind or experience is to be taken, whether as a section of reality or as the whole. Hence hopeless confusion ensues. Hence in Croce even, who *is* a metaphysician, it is never clear whether what is manifested through art is the whole, or something finite.<sup>1</sup> While, as we have seen in discussing feeling, he sometimes says that what is intuited or expressed is a state of our own passions, what as individuals we experience, suffer or desire, *i.e.*, something personal and finite, in other places he affirms that the artist should never allow what is personal or finite to penetrate into his art, that the consideration of his state of mind as man is irrelevant to the critic. As for æstheticians who are innocent of metaphysic, and they are many, they certainly mean finite minds, *my* feelings or emotions; parenthetical and not very intelligible modifications are sometimes introduced in the form of impersonal or universal feelings or states of mind. The danger and disaster we fear for Æsthetics from Idealism, are those we have witnessed in considering the question of feeling. Hence my reluctance to adopt idealist terminology; hence my concern with mind and hence

<sup>1</sup> See the already quoted essay "Il Carattere di Totalità," in *Nuovi Saggi*.

too my sole excuse for alluding to mind when I do not profess to know what is meant by it any more than I know what is meant by matter. The conclusion to which we have been driven is that in art it is the universe or the Absolute as such which is manifested, and our contention is that if mind is used as a finite category (and it is used as such) there is no more reason to call the whole mind, than to characterise it by another finite category, matter.

Idealism tries to do two things at the same time, two things which are moreover inconsistent. As a metaphysic, it insists that there is the universe or Absolute which as such is not the same as any part of itself and is not to be characterised by any finite category; in this insistence, it can scarcely raise any opposition and in this we have followed it. As epistemology, however, it tries to identify the universe with mind, with a finite; in this we cannot follow it.

*"Beauty" not a Finite Category.*

It might, however, be objected that we too, because our enquiry is limited to a special field, have been led to characterise the universe by a finite category, the æsthetic category. The objection would not be just. For the whole argument has consisted in trying to use the æsthetic category as a finite predicate; we have seen that this is not possible. Even when referring to such abstractions as the secondary qualities, we have seen that Quality (with which the æsthetic whole has been found to be identical), besides presenting to direct inspection the features attributed to the universe, resists all efforts to attach it as part or attribute to any particular. We have been forced to say that it is the whole, the universe, or Absolute and is the acme, flower or unity of all other entities. The universe cannot be characterised by any predicate but the æsthetic category; we can, however, apply the latter to the universe or say that the universe is beauty or beautiful (popular terms, which, being confused, we have preferred to avoid). But that is possible, merely because to say that the universe is beauty, is to make a tautologous statement. It is to say that the universe is whole or universe, or that the One is one. That, about the One, is "all we know and all we need to know".

Our hope is that this argument has, not indeed solved, but at least systematically brought together, the main perplexities in Æsthetics. For Metaphysic, however, it leaves, if it does not raise, great difficulties. Why should there be, as there apparently are, many manifestations, epiphanies or avatars? We can say that each manifestation subsumes the rest (but

is that so?) and that the Universe evolves. But what does that mean? Again why should there be judgment as well as manifestation or æsthetic apprehension? What do I mean by my terms of refuge or mythology, of the pyramidal configuration of particular entities with an apex or immediately relevant situation? I do not know. These questions it were laudable in all to wish, impertinent in me to try, to answer. For illumination we need, not an enquiry in a special field, but a Metaphysic which will explain the particulars or finites and thus the whole.

### III.—RECENT CRITICISM OF THE IDEALIST THEORY OF THE GENERAL WILL (I).

BY J. H. MUIRHEAD.

#### I.

THE criticism that has recently been directed against the theory of the reality of the General Will is on one side merely part of the general reaction against the idealistic philosophy as a whole that has been so prominent a feature of the thought of our time. But it has an independent root in its supposed connexion with the theory of the State which was a leading factor in the psychology of the German nation before the War. It is true that the theory received support in England from writers who would have repudiated high sounding claims for the State as the embodiment of a will more than human. But this modification is held in no way to alter the essential spirit of the theory. The cloven-hoof may be concealed but it is still there. Wherever the logic of the theory is allowed to have its way it is sure to reappear in an exaggerated estimate of the claims of the State over the individual and to constitute a menace to social freedom and to the spirit in which from the beginning in British history the rights we hold dearest have been won.<sup>1</sup> Mixed with the philosophical there has thus been a political interest which has given point and energy to the attacks of critics like Prof. Hobhouse whose book on *The Metaphysical Theory of the State* has had an influence comparable to that of some of the great historic tracts for the times. What in this and similar criticisms is particularly significant is the support that younger writers who are not metaphysicians have found in them for theories admittedly revolutionary of the State as we know it.<sup>2</sup> Prof. Hobhouse, so far as I know, has nowhere committed himself to the conclusions that writers like Mr. Cole have deduced from his metaphysical argument ; but that practical issues of such magnitude are involved seems to show

<sup>1</sup> See Ernest Barker's brilliant Article on "The Discredited State" in the *Political Science Quarterly*, Feb., 1915.

<sup>2</sup> Particularly Mr. G. D. H. Cole. See *Social Theory*, p. 93.

that it is time we tried to get away from the disturbing atmosphere of the War and to arrive at a dispassionate estimate as to 'what is living what dead' in this historic theory.

The first thing it is essential to realise is that the theory is 'historic,' not only in the narrow sense of belonging to the history of philosophy but in the much wider and more significant sense of being an answer to the problem of a whole age in the political development of Europe. Gierke has shown how the idea of society as a real corporate unity passed from the ancient into the mediæval world without a break. It was this conception that by the end of the seventeenth century had been largely lost in the break up of the mediæval system and the development of the new idea of the natural rights of the individual. The problem of the Age was how to conceive of society so as to reconcile the order and discipline of law and institution with the claim for liberty. Hobbes's solution of it is familiar. It was a mighty effort to rescue the idea of the common self or will, which seemed to be at the foundation of civil loyalty, from dissolution. But it was a heroic remedy in which the rights of the individual were lost. In the language of a later day the will was there but the generality had disappeared. Equally familiar is Locke's attempt to secure individual against State and Government conceived of as in their essence an infringement of natural right. Generality was secured but will was emaciated to a fragment. Thenceforth the problem was to find any *moral* foundation for the State at all, any point of view from which it was possible to speak of a 'right' in what opposed itself to the individual will.

The first and simplest answer was to conceive of a will equally natural with the individual will but more primitive and with a more universal object. It was in this form that the theory of the general will was put forward in the celebrated encyclopædia article on *Natural Right* by Diderot who seems to have been the first to use the phrase in philosophic literature. But it was at once clear that an answer of this kind, by leaving one natural right standing beside another, merely eluded the problem. How from the clash of two natural rights was it possible for any moral right to emerge? Unless it could be shown that the claims of society had a moral foundation and in some way corresponded to the deeper nature of the individual himself, that in becoming a member of organised society he rose from the level of the animals to that of a being capable of setting a law to his members and submitting himself whole-heartedly to it, the problem of the age remained unsolved.

It was this that the genius of Rousseau enabled him to perceive. To him from first to last it was a moral problem. The common self was to be retained, individual freedom was to stand. But it was a common self whose end was the 'virtue' of the individual, it was an individual liberty the essential condition of which was loyalty to the spirit of community. With what ambiguities and contradictions Rousseau developed his conception of the general will thus understood, at one time seeming to sacrifice individual freedom to the community, at another to be laying only a deeper foundation for the anarchism which exalts individual conscience above all the forms of law and institution, is a twice-told tale. It only witnesses to the complexity of the problem and the imperfection of the material that lay to his hand. The substance of his teaching is to rest the claim of organised society and the loyalty of its members on the degree in which it provides the conditions for the exercise of their moral freedom. On the one hand the society or State he has in view is that whose laws and institutions are the reflexion of what the citizen would will when he is at his best. On the other the individual he speaks of is one who has taken into his heart and conscience the spirit of the laws and in obeying them may be said to obey only himself.<sup>1</sup>

It was from Rousseau that the theory passed into the philosophy of Kant and Hegel and from them again into idealistic thought in our own country at a period when the great problem of the eighteenth century may be said to have been reproduced on a smaller scale. It would take me too far from my subject to draw out the parallel in detail. It is sufficient to recall that current Liberalism in the middle of last century was still largely founded on the individualism of Locke, the current conception of law upon Austin's theory of it as resting for its authority on the enactment by the sovereign. The idealistic doctrine was an attempt to replace these makeshift theories by one more in consonance with the spirit of the new age which had been initiated by Rousseau and Kant.

The first, and still the most powerful, statement of it is that of Bradley's chapter on "My Station and its Duties" in *Ethical Studies*. So far as I know Bradley nowhere uses the phrase "General Will" (perhaps from a sense of its inadequacy to express a universal which permeates the particulars and unites them organically with one another)

<sup>1</sup> I need hardly say how much I owe in this condensed statement of the historic significance of the theory to C. E. Vaughan's Introduction and Notes in his classical edition of *The Political Writings of Rousseau*.



but his teaching is essentially one with that of writers who do. He starts from the distinction between the self or will "as it happens to exist and find itself here or there" and the good will or "the will that realises an end which is above this or that man, superior to them and capable of confronting them in the shape of a law or a right" (p. 145). This is admitted to be an ideal. But it is not on that account any "unreal form of the mind but a living soul that penetrates and stands fast in the detail of actual existence. It is real and real for me" (p. 148). It is "above ourselves" but this does not mean that it exists apart from our wills. "The good will is meaningless if it be not the will of living human beings" (p. 147). But such beings have a two-fold nature. On the one hand they are numerically separate, known to feeling as existent from moment to moment. On the other hand they pass beyond this mere separateness "because of and in virtue of community with other selves". The attempt to find the essence of the individual merely in what separates him from others is doomed to failure. "Out of theory no such individual man exists." In taking away the world of his relations we have taken him away (p. 151). This is not a mere biological or psychological fact. It is also an ethical fact; for the community into which a man is thus born and with whose nature he is saturated, has its customs, laws and institutions which embody purposes and ideas which make demands upon him, confronting his wandering desires with the fixed imperative of his "Station and its Duties". It is in this sense that the systematised moral world is the reality of the moral will: my duties on the inside answer to due functions on the outside. Between these, the world of the ought and the world of fact, there is no ultimate contradiction. The external is already in part a reflexion of the will for good: "it is there waiting for us" (p. 180). Only indeed "in part"; but this ought not to discourage us for its very defects "point to the strength of the life that can endure such parasites and flourish in spite of them" (p. 166). History must be read as the working out of forms corresponding to true human nature through various incomplete stages to completion (p. 173). "Leaving out of sight the question of a wider society" we may say that the State is the name for that system of wholes in which in the main a man's station and its duties fall and which "partly by its laws and institutions, but still more by its spirit, gives him the life he does live and ought to live" (p. 157). This must not be taken to mean that the welfare of the State is something higher than the welfare of individuals, but merely that it is ruinous to

separate them. "Personal morality and political and social institutions cannot exist apart; and (in general) the better the one, the better the other."

The difference between Green's statement of the theory and Bradley's comes partly from the difference of approach, partly from the more critical attitude that Green adopted to Hegelian terminology and his determination to express what was true in it in home-spun English, but chiefly from a certain difference in temperament and experience to which I shall have to return. But the essential features of the theory are the same in both. Like Bradley's, Green's social and political philosophy is merely the other side of his ethics. It is fundamentally a theory of the will. The will is not some distinct part of a man but "simply the man". "In willing he carries with him so to speak his whole self to the realisation of the given idea."<sup>1</sup> Deeper than the self which is actually realised there is the consciousness of a self which ought to be, which constitutes the spring of progress in individuals and societies. If Green does not speak of this ideal as the "real" will and even in his formula of self-realisation seems to exclude it, he would have been the last to deny that the ideal of the potential has a reality of its own which, as the source of the value of the actual, is "before it". His doctrine of the eternal self-consciousness operating in the human is well known. It is this will to betterment or to a fuller realisation of the self that is the source of the customs and institutions of society. In these we have the same contrast between the actual and the potential, fact and significance, as in the individual will. They have an origin in time and exhibit all sorts of accidental features, but as a whole they are the result of the operation of the need to give permanence to the conditions of human well-being. This is true in a special sense of the State: "the most conspicuous product of self-consciousness". In its genesis all kinds of accidental causes and motives are operative, but the general result can only be explained by supposing that underneath all accidents there is something more than accident, underneath the mixture of motives a basal element of unselfish devotion to a common good, however vaguely this may be conceived. It is here we are to find the ultimate source of the will to bring natural egoism into subjection to social needs: not in fear of the law or public opinion (though these may be factors in its genesis) but in "a common desire for certain ends—specially the *par*

<sup>1</sup> *Proleg. to Ethics*, p. 158.

*vitaque securitas* to which the observance of law or established usage contributes." It is in virtue of this community or identity of ends that this will can be called "general". It is something that resides not in any person or persons by whom it may be imposed but in the "impalpable congeries of the hopes and fears of a people bound together by common interests and sympathy".<sup>1</sup> More particularly must the institutions by which equal rights are guaranteed to members of a society be conceived of as "the expression of and maintained by such a general will". "It is in this and not in the abstraction of a wielder of coercive force that the sovereign power must be presented to the people if it is to command habitual obedience."<sup>2</sup> After quoting the lines of the seventeenth century poet,

There's on earth a yet auguster thing,  
Veiled tho' it be, than Parliament and King,

Green goes on to identify it with what Rousseau means or ought to mean by his "sovereign". "What he says of it is what Plato and Aristotle might have said of the *θεῖος νόμος* which is the source of the laws and discipline of the ideal polity and what a follower of Kant might say of the 'pure practical reason,' which renders the individual obedient to a law of which he regards himself, in virtue of his reason, as the author and which causes him to treat humanity equally in the person of others and in his own always as an end and never merely as a means."<sup>3</sup> *Vice versa* political liberty consists essentially in the power of citizens as a body to make the most and the best of themselves. Liberty in the negative sense of freedom from external constraint—liberty in all the forms of doing what one likes with one's own—has its value as the condition of this; set up as an end in itself, it is a principle of anarchy. True, civic liberty is thus something much more complex than the older libertarian theory supposed and may involve all kinds of interference with the freedom not only of others in relation to the individual, but of the individual's activity in relation to himself. Conscious of the sinister uses that might be made of such a claim on the part of the State, Green is careful to explain and justify the right of resistance, though only, in the end, in the sense in which "right" coincides with "duty".

I have recalled the statements of Bradley and Green at some length because the critics of the theory of the general will have confined themselves too exclusively to the form it has received from later writers, more particularly from Bosanquet,

<sup>1</sup> *Works*, II., p. 404.

<sup>2</sup> *Ibid.*, p. 499.

<sup>3</sup> *Ibid.*, p. 388.

to the neglect of the older at least equally authoritative statements of it. This has led them to do less than justice to the ethical basis of the theory in its British form. If Bosanquet seems to have parted from this it is not because of any essential difference of outlook, far less of any underestimate on his part of the place and value of the individual will. He has gone further than most in asserting the power of the will over circumstances,<sup>1</sup> exposing himself to attacks from collectivist writers the bitterness of which is only equalled by that of the critics who have accused him of the opposite oneness of an exaggerated emphasis on the corporate will. The difference is rather that (as he himself tells us)<sup>2</sup> he held that the time had gone by for the semi-apologetic attitude of Green and the writers of his time. Still more important in view of subsequent criticism was the advance in the psychological analysis of the facts of control, mainly due in this country I think to Prof. Stout, that seemed to Bosanquet to afford a telling illustration of the sense in which "a will" could be embodied in society and how it is possible for the individual as we know him to be in identity with this will.<sup>3</sup> This "psychological illustration," indeed, may be said to have been his contribution to the theory.

The will, according to the psychology in question, is a system of ideas or groups of ideas ('complexes' we should now call them) which tend to pass into action but are liable to be counteracted or again reinforced by one another. Normally all these parts are connected in some degree and subordinated to some dominant idea which dictates their place and assigns their importance relatively to the others. If we ask which ideas tend to assume this position the answer is those "distinguished by logical capacity," in other words which prove themselves most competent to meet the ordinary requirements of life. No others "will do". If again we ask what insures that the ideas dominant in the individual mind shall be co-ordinated in any way with those dominant in others, the answer is that "ideas do not spring from nowhere: they are the inside which reflects the material action and real conditions that form the outside". Life simply cannot go on unless there is a common element in men's

<sup>1</sup> See esp. *Value and Destiny of the Individual*, c. iv., "The Miracle of the Will".

<sup>2</sup> *Philosophical Theory of the State*, p. ix.

<sup>3</sup> *Ibid.*, p. 136. Perhaps these differences might be summed up by saying that while Green approaches the whole subject in the spirit of Aristotle and Kant, the main influences in Bosanquet's form of statement are Plato and Hegel.

ideas. On the other hand "if the external life of a Community works as a system then the internal life must work as a system also". This system or "machine" is never quite harmonious and readjustments are continually being made so as to get it to work better. The more important workings and the direction of the readjustments are the most familiar *expression* of the general will. *The general will itself is the whole assemblage of minds considered as a working system with parts corresponding to one another and producing as a result a certain life for all these parts themselves.* It is thus not anything that is to be found in a vote upon a single issue, nor is it public opinion in the sense of a set of judgments in the newspapers or elsewhere. It is not even a *de facto* tendency except in so far as this is in harmony with the general scheme of life or spirit of the society. It is not superficial or sentimental as all these may be: "it is essentially logical". It follows also that we are never wholly aware of its working. If we were we should have the whole general will in one explicit consciousness. We have moments of insight and there are great men who have an intuitive touch with the real spirit of their times but "on the whole we are to the structure of legal, political and economic organisation like coral insects to a coral reef". This is no excuse for fatalism. Man's mission is to understand and direct himself. He is summoned by his nature as an intelligent being to the work of interpretation and practical organisation. "The result is that the general will is a process continuously emerging from the relatively unconscious into reflective consciousness. And the reflective consciousness does its work best when it as nearly as possible carries on, in self-criticism and adjustment of purpose, the same moulding of the individual mental system as goes on unconsciously in the formation of the every day practical will."<sup>1</sup>

It is in view of this statement that we have to read the features of the theory in Bosanquet's presentation of it that have drawn the main fire of its critics: the emphasis on the coherence and continuity of the elements of the social mind with one another and with the minds of individuals (in spite of conflicts) in "a single web of content";<sup>2</sup> the view that organised society as a whole contains the expression of an idea of a life (and a will to realise it) fuller and more satisfying

<sup>1</sup> I have availed myself in this statement of Bosanquet's Article on "The Reality of the General Will," in *Aspects of the Social Problem* (1895), now out of print, as containing the clearest though less familiar statement of his contribution to the theory.

<sup>2</sup> *Philosophical Theory of the State*, p. 181, cp. 173.

than any individual can actually realise; the reiterated distinction between the real and the actual or apparent will, as equivalent to that between the permanent trend of a man's social purposes and his immediately operative desires; above all the conception of "true individuality as consisting not in isolation but in the distinctive act or service by which individuals pass into unique contributions to the universal".<sup>1</sup>

Before turning to the criticisms of the theory which are the proper subject of these articles, we may notice one which is implied in the title under which it has been attacked and by which it might be supposed to be discredited in advance. To Prof. Hobhouse and others it is a "metaphysical" theory in the sense that it is based on certain presuppositions as to the nature of individuality. This is true but it is equally true of any other theory on the same subject that is worth discussing, not least of the critics' own. The difference between one theory of society and another lies in the nature of its metaphysical presuppositions and their comparative defensibility. We have already had occasion to notice the fundamental difference between the view which finds the essence of human individuality in what separates persons from one another and the view which finds in this isolation only one element in the fuller concept. On the former the human soul is a centre of sentience and feeling whose relations with others lie outside its proper nature as an individual. On the latter souls are indeed sentient centres but as sentient they are merely *centres*. Their being and significance lies in their circumference, in what they include and the way in which they include it. It lies in their relations to the larger life with which sentience and feeling put them in contact: their own bodies and minds, the bodies and minds of others, the whole choir of heaven and furniture of earth. The question is not therefore whether one theory is metaphysical the other not, but which metaphysic lends itself the better to the interpretation of the facts of man's individual and social life; gives us the fuller insight into the nature of human freedom and the relation to it of different forms of corporate life. If the critics of the theory of the General Will had been less afraid of metaphysics and more careful to make their own presuppositions clear to themselves the whole discussion would, I believe, have been simplified. Dr. McDougall, to take a single example, has puzzled his readers<sup>2</sup> by the apparent inconsistency with which, after

<sup>1</sup> *Op. cit.*, p. 183.

<sup>2</sup> *E.g.*, Dr. Morris Ginsberg in *The Psychology of Society*.

propounding a view not easily distinguishable from Bradley's and admittedly founded in his chapter on "My Station and its Duties," he goes on to declare relentless war upon Bosanquet who differs from other idealists only in the thoroughness with which he has here appropriated Bradley's teaching. What has really happened is that Dr. McDougall (just it seems to me from the lack of clearness in his metaphysics) has founded his constructive theory upon one conception of the nature of the individual, his criticism upon another and wholly different one.<sup>1</sup>

<sup>1</sup> Compare his acknowledgment to Bradley (*Group Mind*, p. xiii.), with his parody of Bosanquet (p. 155) and with his own account of the relation of the State to the individual (p. 287). It is an excellent thing that writers should reach the same general conclusion from different points of view, but for clearness it is well that they should understand the route by which they have travelled.

(To be continued.)

## IV.—DISCUSSIONS.

### THE 'LEGEND' OF ARNAULD'S REALISM.

SINCE Mr. Lovejoy (in *MIND*, No. 128) takes exception to certain opinions which I had expressed (in my *Realism*) concerning Arnauld's *Livre des idées*, it is necessary for me, I think, to explain why I held, and still hold, these opinions.

What I have to maintain is that Arnauld refuted the representative theory of 'perception' (where this word may have the wide French connotation which I translate 'knowledge' but is also applied more narrowly to the particular and important case of sense perception and of acquaintance with material objects), that he does so in a comprehensive fashion, that he is realistic, and that there is a notable resemblance between his contentions and those, say, of Thomas Reid.

Even Mr. Lovejoy, I take it, could not deny that Arnauld supposed himself to be engaged in refuting a certain kind of representative theory, very widely spread and accepted by Malebranche quite naïvely as something to which everyone assents. So much of the *Livre des idées* consists of sledge-hammer blows with this express purpose that a denial, here, could not possibly be sustained.

The representative theory which Arnauld attacks states that certain objects, and particularly all physical ones, cannot possibly be known *par eux-mêmes* and that we *must* be acquainted, in their stead, with certain intermediaries, substitutes or effigies. The reasons for this dogma are ultimately two—first, that extended bodies cannot be 'intimately united' to an unextended mind, and secondly, that there cannot be direct contact between the mind and those bodies (since they are distant).

Traditionally, the doctrine which Arnauld is here attacking, is the doctrine of the *species impressa*. These 'species,' 'notions,' or 'phantasms' may or may not have been spiritualised: but in any case they were generally held to be 'ideas' by Malebranche and by others. Such a representative theory is therefore a variety of idea-ism.

Unquestionably, the greater part of Arnauld's polemic is directed towards showing that there is no need for *these* ideas and that they are, in fact, fictions and chimeras. He explains, time and again, that the fact of knowledge never requires to be explained by 'contact' or 'union' or any other irrelevance of this nature, that the mind does not encounter these screens and these shadows ex-



cept in the pages of certain philosophers, and that there are no ideas apart from the modalities of 'perception'.

For Arnauld (as later for Reid) the fundamental confusion here is the confusion between cognition and local presence, and his particular aversion is the unjustifiable dogma that absence is any barrier to adequate cognition. This fallacy, I submit, is still with us, whether in the form of 'physiological scepticism' or of some other; and in my view no one ought to hold it who has grasped the meaning of Arnauld's contention. I suppose that a refutation may be 'classical' even if it is little known: and now that Mr. Lovejoy has incited me to read Arnauld all over again I am even more impressed than I formerly was with the thorough and comprehensive fashion in which he sets about his business.

Chapters vii. to xi., say, of the *Livre des idées* would effectively dispel my doubts if I had any. Malebranche, to be sure, fell into this representative fallacy with a childlike ingenuousness quite remarkable in so considerable a philosopher. If the mind, he says, saw the sun and the stars *par eux-mêmes* it would have to sally forth and take a walk among them. This is local contact with a vengeance and Arnauld, having to refute a dogma so fantastically put, twists the knife round and round from a variety of angles. His point is that the local absence of things has nothing to do with the possibility of knowing them. A mother surely may weep for her absent child: general objects (which Arnauld clearly distinguishes from cerebral images) have no locality and yet may be known; and so on.

One of his prime contentions, indeed, (it is part of the 'demonstration' in chap. viii.), is that *because* my mind has the faculty of perceiving sun, stars, and the rest it is *therefore* capable of perceiving *distant* objects; or, again, that because it is bodies (not the ideas of them) that can injure or aid me I must be acquainted with *them* if my knowledge of them is really to be useful to me (chap. x.).

It is also quite clear, I think, that Arnauld supposed himself to have vindicated our faculty of *unmediated* acquaintance with physical objects. Out of many passages (not at all isolated and plainly neither casual nor unintentional) I may cite the following (chap. xx.), "I know that I see bodies . . . that I see the sun however distant it may be from me. . . . Why, then, if any one asks me how, not being corporeal, I am able to perceive bodies present or absent, would it not be a sufficient reply to say that because my nature is a knowledgeable nature I know from my own experience that bodies are among the things which God has willed that I should think of; and that having created me and joined me to a body, it was appropriate for him to give me the faculty of thinking of material things as well as of spiritual ones?"

Despite the number of such passages Mr. Lovejoy maintains that Arnauld, 'plainly and expressly repudiated a direct knowledge of real things'. I must confess myself surprised at this verdict and I am the more surprised when I consider Mr. Lovejoy's reasons.

These appear to be (1) that the doctrine of 'representative perception' 'in the ordinary sense' implies that the ideal representatives are mental and that Malebranche did not suppose *this*; (2) that any such interpretation is 'forbidden' since, according to Arnauld, we do employ ideas when we think (indeed we must be either 'virtually' or 'expressly' conscious of this), and since he takes these ideas to be modalities of our minds and *êtres représentatifs*.

On the first head it is enough to say, I think, that definitions are free, but that it is unnecessary to *define* a philosopher's contentions away. Neither Arnauld nor Reid understood the theory which they attacked in the sense which Mr. Lovejoy proposes to give it; and, as I have said, the doctrine which they attacked is still very common. To prove the point as regards Reid I have only to quote his account of the mistake of 'all previous philosophers'. "They all suppose that we perceive not external objects immediately and that the immediate objects of perception are only certain shadows of the external objects. These shadows or images which we immediately perceive were by the ancients called *species*, *forms*, *phantasms*. Since the time of Descartes they have commonly been called *ideas* and by Mr. Hume *impressions*. But all philosophers, from Plato to Mr. Hume, agree in this. That we do not perceive external objects immediately, and that the immediate object of perception must be some image present to the mind" (*Intellectual Powers*, Essay II., chap. vii.).

These *species* are precisely what Arnauld found in Malebranche (and in the others) and declared to be fictions. There is no word of their 'mental' character in Reid's definition. Mr. Lovejoy, therefore, has to maintain that *Reid's* criticism of representative perception is 'an interesting but ill-founded legend'.

(2) As regards the second argument, I should say *non sequitur*. Many realists believe that knowledge involves psychical processes which have a 'content' and that this content (a) declares itself to consciousness, and (b) signifies and represents the properties of the object known. Reid's doctrine of 'natural suggestion' and the rest of it is plainly an example. For him sensations are psychical existences, 'acts of the mind' which 'signify' and 'suggest' ('naturally' and inevitably) physical reality. To be sure, Reid *may* not have been consistent, or as unequivocal a realist as he supposed himself to be. As we all know, this was Sir William Hamilton's opinion of him. It is quite another thing, however, to make a 'legend' of Reid's contentions by means of a highly disputable argument like Mr. Lovejoy's.

Personally, I see no reason to suppose that Arnauld believed either that 'perceptions' are 'intermediaries' or that their object is 'transcendent'—which is the interpretation that Mr. Lovejoy would force upon us. Perceptions for Arnauld are modes of the mind because they are variable occurrences, not its permanent essence. They have, in modern language, content or filling which

is automatically self-revealing. This when mistaken leads to errors in knowing. None the less, there seems no sufficient reason for denying that the representative function of these modes of the spirit is simply their business of knowing and that this knowledge includes the faculty of apprehending external things. Certainly Arnauld says as much as this very often indeed, and I do not see why a Cartesian might not have developed the master's doctrine in this direction with as much consistency as is reasonably to be expected in a philosopher. It was because Reid supposed that *any* Cartesian must mean by 'ideas' what he, the Glasgow professor, took Descartes to mean by them, that he said of Arnauld's theory that it 'looks like a weak attempt to reconcile two inconsistent doctrines by one who wishes to hold both' (*op. cit.*, Essay II., chap. xiii.). This imputation apart, Reid admitted that he considered Arnauld's 'doctrine concerning ideas more rational and more intelligible than that of any other author of my acquaintance who has treated of the subject' (*ibid*).

The grudging tone of Reid's account of Arnauld in this chapter, due to his foible for supposing that he was bound to refute *all* previous philosophers, makes this final admission the more significant.

JOHN LAIRD.

## REPLY TO PROFESSOR LAIRD.

UNLESS Mr. Laird uses 'realism' in some private sense, his supposition that I have described as a 'legend' the belief that Arnauld was a realist is unaccountable. For Arnauld's realism is evident, and was by me, not denied, but plainly asserted. I contended, however, that his realism was of the dualistic sort; in other words, that he held to the familiar theory that we perceive physical objects, not directly, but through the intermediation of mental entities called ideas, which are representative of the objects. To this issue I confine my reply. Mr. Laird's misconception of the epistemology of Malebranche seems to me too profound to be briefly dealt with.

Much of Mr. Laird's argument appears to rest on the assumption that the opinions of Arnauld are to be gathered largely from the works of Reid. This assumption does not seem unavoidable, at least to one not of Scottish training; and I do not think it needful to discuss the reasonings based upon it. The paper to which Mr. Laird replies did not so much as mention Reid. In Arnauld's own writings there undeniably are, as was remarked in the paper, several passages which, taken by themselves, seem favourable to Mr. Laird's interpretation. But the rules of sound exegesis require that these passages be construed in the light of (a) Arnauld's formal definitions of his terms; (b) his general argument and the nature of the position he was attacking; (c) his reiterated, emphatic, and entirely unequivocal repudiation of the view which Mr. Laird and others have since attributed to him. A number of examples of such repudiation were cited in my article. Mr. Laird nevertheless remains of the opinion that "Arnauld supposed himself to have vindicated our faculty of *unmediated* acquaintance with physical objects" and can "see no reason to suppose that Arnauld believed that 'perceptions' are 'intermediaries' or that their object is 'transcendent'". I can only invite Mr. Laird to consider seriously such passages as the following—duly bearing in mind that, as expressly defined by both Descartes and Arnauld, *objectivement* means *par représentation*, and that in all Cartesian use *objective* (to quote Sir William Hamilton) "corresponded with *in intellectu, prout cognitum, ideale*, as opposed to *reale, proprium, prout in seipso, etc.*":

(1) Si je pense au soleil, la réalité objective du soleil, qui est présente à mon esprit, est l'objet immédiat de cette perception; et le soleil possible ou existant, qui est hors de mon esprit, en est l'objet médiat, pour parler ainsi. Et ainsi l'on voit que sans avoir recours à des *êtres représentatifs* distingués de nos perceptions, il est très-vrai en ce sens que non-seulement au regard des choses matérielles mais généralement au regard de toutes choses, ce sont nos idées que nous voyons im-

*médiatement*, et qui sont *l'objet immédiat de notre pensée*; ce qui n'empêche pas que nous voyions aussi, par ces idées, l'objet qui contient formellement ce qui n'est qu'objectivement dans l'idée. (2) Les idées sont ou des attributs ou des modifications de notre âme. (3) Je déclare ici que, si par concevoir *immédiatement* le soleil, etc., on entend ce qui est opposé à les concevoir par le moyen des idées . . . non distinctes des perceptions, je demeure d'accord que nous ne les voyons point immédiatement.<sup>1</sup>

Against my assumption that such passages mean what (in Arnauld's carefully defined terminology) they say, Mr. Laird, aside from irrelevant references to Reid, presents chiefly two arguments. (1) Arnauld held that we can know objects without their 'local presence' at the positions where we are. This is true, but is beside the point. There is no conflict between the theory of perception by means of representative 'mental' ideas, held by Arnauld, and the belief in the possibility of the perception of distant objects. On the contrary, the latter belief is one of the usual grounds of the former. (2) Arnauld's 'ideas' or 'perceptions,' though defined as *êtres représentatifs*, are nevertheless (thinks Mr. Laird) to be conceived as 'psychical processes' whose 'representative function' is simply their 'business of knowing'. Mr. Laird's statement in his antepenultimate paragraph of what appears to be his own (and what he believes to be Arnauld's) view on this matter, I find elusive. If the 'content' of which he speaks, and which he distinguishes from 'psychical processes,' is, as his language suggests, existentially other than the 'object known' which that content 'represents'—then Mr. Laird too would seem to hold a theory of representative perception. If, on the other hand, the 'object' and 'content' are one, why does the former need to be 'represented' by the latter? The fact seems to be that, since Arnauld constantly speaks of ideas as representative of external objects, Mr. Laird—if he is to assimilate Arnauld's position to his own—is himself compelled to lapse into the language of representationalism, thereby blurring precisely the distinction which is at issue—the distinction between the immediatist and the representational theories of perception. If we keep that distinction clear, Arnauld's stand with respect to it is unmistakable. His own language plainly excludes the supposition that he means by 'ideas' mental processes—the mere event or 'business' of knowing. In a passage cited above he expressly declares ideas to be the immediate *objects* of our awareness—things we 'see,' not the function of seeing—but to be intra-mental objects which serve as the means of our knowledge of 'existent' objects 'outside the mind'. There is in my previous article much more evidence on the point—to which Mr. Laird seems to have given no attention.

<sup>1</sup> *Des vraies et des fausses idées*, 1845 ed., pp. 51, 59, 66. The "representative entities distinct from perceptions" are, of course, Malebranche's timeless essences.

## THE INFINITE WHOLE.

PROF. J. W. SCOTT's article in the January Number promises to clear up one of the most discreditable of the ambiguities which tantalise the student of philosophy. He raises the question of the meanings of the 'infinite,' and argues that there is nothing in the modern mathematical conception of infinity that is incompatible with his 'idealistic theory of the Infinite'. Nor is it difficult to believe this. For Mr. Russell's conception was certainly not intended to have any relation to edification, and was devised only to cope with certain technical difficulties of mathematics. In Prof. Scott's use, on the other hand the Infinite is plainly a eulogistic expression, and appears to denote a term of rhetoric rather than of logic. He feels it important therefore to make clear that these two senses do not conflict, and indeed have nothing to do with each other.

But this is hardly an adequate reason for formulating his convictions in what appear to be flatly self-contradictory terms. He repeatedly speaks of "the infinite whole of things" which is "a big proposition" "welling up in us and speaking to us"; but he appears to be quite unconscious that such *façons de parler* are very objectionable from the standpoint of a conception of the infinite which is older than either of those he discusses. It goes back indeed to Kant and Aristotle, and regards the infinite as that which *cannot form a whole*, because it can never be completely got together into a whole. Consequently an infinite whole is for it a sheer contradiction in terms.

Nevertheless we seem quite often to encounter infinities thus refractory to synthesis. The case of Number is not perhaps a case in point; for though numbers do not form a whole, no one wants them to; seeing that it is hardly possible to conceive any purpose for which it would be necessary or desirable to conceive them as forming a whole. It is therefore preferable to construe the infinity of the number-system, not as an obligation + a failure to come to the end of counting, but as the *right* to form as large numbers as may be required. But (Euclidean) Space and Time appear to be unquestionable infinities inherently incapable of forming wholes in any significant sense; and it is at least arguable that physical (*i.e.*, cosmic or astronomical) Space and real change also possess this sort of infinity.

These however are not the cases which cast most doubt on the interpretation of reality as an Infinite Whole. It is when we look more closely into the behaviour of the reals we know, that it

becomes more and more difficult to believe that they can possibly combine into a whole of reality. To illustrate one only of the difficulties which then arise—how can the experiences even of two minds be really synthesised? It is easy enough, of course, to say that they share in a real world common to both, though the unending disputes of philosophers about the reality of the external world sufficiently show that this assumption is not easy to make good. But the experiences that can be fitted into a common world form but a small portion of the contents of the two minds to be combined into a whole. The greater part of their contents appear to be private, incommunicable, and 'subjective' in various degrees. These contents moreover exhibit a positive character which resists combination into a real whole. How can the feelings, desires, idiosyncrasies, delusions, dreams, defects, errors, and imaginations, of two minds combine into a unity? *A fortiori*, how can an indefinite plurality of such minds, differing indefinitely in quality and degree of development, be amalgamated with each other and with an indefinite number of reals which do not appear to be minds at all, into an all-inclusive scheme of reality?

Surely before we begin apo-trophising the infinite whole we should try to make it probable that the reals to which we assign indefinitely various degrees of reality can really form a whole at all, and that so our notions of a 'universe' are applicable to reality. It is customary to make this assumption, but it is never justified. *Prima facie* it appears to be merely a peculiarly audacious form of the ontological argument from essence to existence, seeing that existence not only fails to support it, but positively cries out against it.

Such are some of the more obvious difficulties involved in the notion of an 'infinite whole,' and if Prof. Scott is really anxious to remove them, he should explain (1) what he means by the overtly self-contradictory phrase he delights in, and (2) what reason there is for thinking that his conception of an Infinite Whole actually applies to our reality.

F. C. S. SCHILLER.

## V.—CRITICAL NOTICES.

*Scientific Thought.* By C. D. BROAD. London: Kegan Paul, Trench, Trubner & Co. Ltd., 1923. Pp. 555. 16s.

In the body of this book, Prof. Broad deals first with the traditional concepts of mathematical physics and their gradual modification within the region of physical science and then with the sensational and perceptual basis of our scientific concepts.

### *The Concepts of Physics.*

The task of Prof. Broad in Part I. is, in fact, to exhibit the concepts of mathematical physics as they stand to-day after the splendid triumphs of the last half century have been duly taken account of, to exhibit the common-sense views of the entities with which science deals and then to investigate the relations between them. This is unquestionably a formidable task: but undoubtedly one well worth attempting at this particular stage of development in physical science.

There are two points of view from which the investigation of Part I. is of value. In the first place, it is of importance for the student who wishes to understand the currents of thought in modern physics that he should appreciate the extent to which the traditional concepts of physics have been modified in the course of time, partly and notably through the labours of scientists who are his own contemporaries. The rate of progress in the development of fundamental physical ideas during the last few years has rarely, if ever, been equalled. There is, however, another equally important point of view. The student of scientific method in general can have no better field for study than modern physics. The advances which have been made are due to important developments in scientific method in a sense in which few previous advances have been. The theory of Relativity has succeeded because of the marvellous structure of its postulates. It has introduced as postulates about the external world propositions of a structure previously used only in a certain branch of pure mathematics. Prof. Broad in the rôle of a 'Critical Philosopher' is concerned with the first point of view. His object is to instruct the student who wishes to understand the view of the world taken by physics of to-day, so that he may use this important information in the task of building up a modern epistemology. Nevertheless, we notice in many places discussions which exhibit, very clearly, points of great methodological interest.



This fact evidently enhances the value of this section of the book very considerably and makes it of interest and value not only to 'Critical Philosophers' but also to the wide class of people who are interested in the methods of some special science or in scientific method in general.

The first chapter of Part I. is concerned with the traditional conception of space. Prof. Broad gives an account of the common-sense view of space and introduces gradually the various modifications required by modern physics. He makes an easy progress from the 'practically familiar' which is logically derivative to the logically primitive which is 'practically unfamiliar'. Incidentally he gives a good account of the difference between pure geometry and geometry applied to the external world. Prof. Broad introduces the Principle of Extensive Abstraction and discusses the method which lies behind this principle. This principle, formulated by Prof. Whitehead, falls into line with a large amount of work on modern logic produced by Prof. Whitehead and Mr. Bertrand Russell. The line of thought developed in this work, whose real value has not yet been appreciated by scientific and philosophical thinkers, has proved fruitful in Prof. Whitehead's attack on the problem of space and cognate problems, and is of general interest. Prof. Broad points out the way in which, by the use of this principle, terms in scientific thought stand for certain properties. Thus, on page 39, we read

'The first thing to notice is that it does not in the least matter to science what is the *inner nature* of a term, provided it will do the work that is required of it. If we can give a definition of points which will make them fulfill a certain pair of conditions it will not matter though points themselves should turn out to be entities of a very different kind from what we had supposed them to be.'

It would, perhaps, have been clearer to make the statement of the position even more drastic and to say that all that we know about points has already been introduced into the conditions which they have to satisfy and that we therefore have no right to criticise any further the type of entity which they turn out to be. The important general point is further illustrated from the definition of irrationals in modern logic. We welcome the long discussion of this definition, for it may fairly be said that anyone who recognises the adequacy of this definition should be able to appreciate the strength of modern scientific method.

Chapter II. deals with the general problem of Time and Change. It gives an account of the way in which the concepts of momentary events and moments can be obtained by the method of Extensive Abstraction from the crude data of perception by means of the relation of partial precedence and partial subsequence between finite events. Thus in particular (p. 56), in mechanics, finite bodies have to be analysed into unextended particles and finite events into momentary ones. The extent to which there is a close analogy

between time and space is discussed and the difficult problems of time which have no analogues in space are formulated.

Other chapters in Part I. deal with the traditional kinematics and its gradual modification in the region of physics through the absolute and the relational theories and the special theory of relativity, and with the traditional kinetics and its gradual modification in the region of physics through Newton's laws and the general theory of relativity.

A summary of arguments and conclusions brings the first part of the book to a close.

### *The Problem of Matter.*

In Part II., Prof. Broad discusses the problem of Matter. His task here is a more formidable one than the task of Part I., for there is undeniably a certain consensus of opinion now as to the way in which the concepts of science should be derived from the commonsense ideas of the man in the street. The problem of Matter has not, at present, reached so advanced a stage.

The work to be done in this problem is, logically speaking, prior to the problems discussed in Part I., for we have here to delve below the surface of the commonsense views of physical objects which the physicist takes as his starting point, and lay bare the foundation of these views in the actual crude data of sensation.

We first have to consider the traditional notion of a bit of matter. Prof. Broad decides on four properties which he takes as the irreducible minimum which an object must have if it is to be called a bit of matter.

1. Its existence and properties must be independent of the minds which observe it and it must be capable of being observed by many minds.
2. It must be 'neutral as between several senses of the same observer' (p. 231), in the sense that the various sensible qualities relating to sight and touch and so on, co-exist in it.
3. Bits of matter must persist with very little change whether they are observed or not.
4. Bits of matter must have more or less permanent shapes and be capable of moving from one position to another.

The grave difficulty of holding that there are any entities which possess all these properties leads to the construction of theories of sensible appearance amongst which the most important are the multiple relation theories of Prof. Dawes Hicks and Dr. G. E. Moore and the object theories advocated by Russell and Broad and other writers. Prof. Broad's statement of the theory which he advocates is given in the following terms on page 239:

'Whenever I truly judge that  $x$  appears to me to have the sensible quality  $q$ , what happens is that I am directly aware of a certain object  $y$ , which (a) really does have the quality  $q$ , and (b) stands in some peculiarly intimate relation, yet to be determined, to  $x$ '.

An exhaustive discussion of the advantages of this theory follows and an equally exhaustive discussion of the possible objections to it. In the analysis of the relation which we may call  $R$  in which the apparent variable  $y$  stands to  $x$ , it would perhaps be better to give at the beginning of the discussion some clearer indication of the difference in type to be expected between the members of the domain and of the converse domain of  $R$ : to suggest, in fact, that the terms which stand in the relation  $R$  to some other term are different in type from terms to which other terms have the relation  $R$ . The point is not that the terms  $y$  and  $x$  which are such that  $y$  stands in the relation  $R$  to  $x$  happen not to be identical. They are evidently and necessarily of radically different types. In the case of a penny, it is not an accidental circumstance that the round physical object is not identical with the elliptical sensum. The circular sensum which a suitably placed observer would sense is not identical with the physical object. The sensum is of different type from the physical object and it must surely be an essential part of this theory of sensible appearance that this difference of type must persist; and it seems, indeed, to be definitely misleading not to state this requirement of the theory in advance. Thus on page 243 we read:

'The properties which  $x$  is said to *appear* to have are the properties which those *sensa* that are  $x$ 's appearances *really* *do* have. Of course the two properties may happen to be the same, *e.g.*, when I look straight down on a penny, both the physical object and the visual appearance are round. Generally, however, there is only a correlation between the two'.

But, undeniably, it is in very different senses that the sensum is round and that the physical object is round. The analysis of the two assertions would necessarily reveal a wholly different logical structure, since physical objects are to be, in some way or other, related to bunches of *sensa* in a way in which no sensum is ever related to groups of physical objects. The sensum theory is introduced in order to accomplish a 'change of subject,' as a solution of the difficulty that we seem to recognise elliptical shape in the penny, when the penny has the incompatible quality of roundness (p. 244). But the many-one relation of *sensa* to physical objects is quite sufficient to justify the introduction of a term of different type. If we are considering the relation of a Member of Parliament  $x$  to one of his constituents  $y$ , the one-many nature of the relation is sufficient to suggest that the fundamental term which is related to  $x$  is the group made up of all the individuals, and this is a term of a wholly different type.

In the discussion of *sensa* the following questions arise, amongst others.

1. Are *sensa* in any way mental?
2. How are *sensa* related to physical objects?

There are various theories of mental acts which are relevant to the

first question and these are mentioned and critically discussed. The second question is the crux of the matter for the epistemologist, anxious to construct the external world in accordance with the requirements of modern logic. It is important to realise at the outset the undeniable fact that our views about the existence and properties of physical objects cannot be reached by a process of inference from our *sensa* and their properties. Thus on page 267 we read

'I suppose that the existence of *sensa* is a necessary condition, but it is certainly not a sufficient condition, of my belief in the existence of the physical world. If there were no sensible appearances to me, I suppose that I should not judge there to be any physical reality. But, on the other hand, there is nothing in my *sensa* to force me logically to the conclusion that there must be something beyond them, having the constitutive properties of physical objects. The belief that our *sensa* are appearances of something more permanent and complex than themselves seems to be primitive and to arise inevitably in us with the sensing of *sensa*. It is not reached by inference and could not logically be justified by inference. On the other hand, there is no possibility of either refuting it logically, or of getting rid of it, or—so far as I can see—of co-ordinating the facts without it'.

Here Prof. Broad touches the fringe of the territory of the student of scientific method. It is surely not by any means obvious that our belief that our *sensa* are appearances of something more permanent and complex is primitive. Further it is obscure in what sense there is a question as to whether this belief can be logically justified by inference. Nothing can be justified by logic except in the sense that if a proposition *p* implies *q*, and *p* is true, then *q* is true. Logic can relate propositions about the external world to each other, but under no circumstances can it justify any belief about the external world. When it has ascertained whether a proposition *p* is on the one hand incompatible with a proposition *q* or on the other hand is involved in *q* (in the sense that if *q* is true, *p* is automatically true also), its function is exhausted. The important issue is whether it is possible to reduce these beliefs to anything more fundamental and to what extent the various parts of the beliefs are compatible.

Subsequent chapters are concerned with the positions and shapes of *sensa* and of physical objects and the dates and durations of *sensa* and of physical objects. The way in which these inquiries with regard to place and shape are pursued side by side with and in relation to the discussion in Part I. of space on the one hand and of time and change on the other is specially interesting and gives an idea of the orderly manner in which the various problems have been organised in this volume.

In Chapter XI. Prof. Broad discusses how the concepts of physical space and motion are connected with our bodily movements

and with positions and movements of our sensa, and in the next applies these results to the notion of sensible and physical space-time. In these chapters and the concluding one on the conditions and status of sensa Prof. Broad breaks much new ground. They are necessarily hard owing to the very complicated nature of the subject matter.

*The Nature of 'Critical Philosophy'.*

We now turn to the Introduction, in which Prof. Broad enters a different arena. He sets out to prove by general statements that philosophy is a definite science with a distinct subject matter; and the particular topics treated in the body of the book are no doubt to be regarded as particular instances specially designed to strengthen the general contentions and to serve in fact as existence theorems.

Now in the division of philosophy into two parts, Prof. Broad puts on one side Speculative Philosophy after a few brief criticisms on which we will not comment. Many general statements are made as to the nature of Critical Philosophy. It deals, we are told, with the analysis and definition of fundamental concepts, and the clear statement of fundamental beliefs. Its task is not performed by any other science. The other sciences use the concepts which critical philosophy tries to analyse. Its method is different from the methods of the natural sciences. . . . Experiments are not made because they would be absolutely useless . . . The method of Philosophy thus resembles that of pure mathematics at least in the respect that neither has any use for experiment . . .

We will offer a few criticisms of some of these statements.

The treatment in the body of the book of the modern concepts of space and time used in physics will make it clear to any reader that these concepts have reached their present development owing to the mathematical insight of certain workers. There can be no question at all, that the structure of physics at the present time and in the future will be essentially mathematical, whatever the nature of physics may have been in the past. The understanding of modern relativity theory is a matter of mathematical technique on the one hand, and the appreciation of the results of experiments on the other. When modern physics has expounded the results of mathematical and experimental researches into the nature of space and time, nothing further remains to be said about space and time until further mathematical and experimental researches produce further advances. Thus, for example, an important outstanding question is the alleged shift of the lines in the solar spectrum. There is at present and there is likely to be for a considerable time a difficulty in reaching any high degree of certainty as to what the facts really are. Until the facts are established, the fact that a theory of space and time requires or does not require such a shift can evidently not be allowed to play any part in the assessment of the weight to be given to the theory. Further development here

depends on the progress of experimental researches and mathematical deductions. If therefore critical philosophy has no use for experiment, for this reason—if for no other—the working out of this problem and other outstanding questions involved in the modern concepts of space and time cannot be a part of critical philosophy. Incidentally these questions are of course a question for mathematical physics and chemistry alone.

Prof. Broad has said that the methods of critical philosophy are different from those of the natural sciences. This admission is a very dangerous one for his campaign to prove that philosophy is a definite science, and it seems at first sight to involve the deduction that the question of the fundamental character of the concepts used for example in chemistry and physics can certainly not form a part of critical philosophy. For, it must be remembered that the considerable progress in fundamental questions contained in the Quantum theory and in the Theory of Relativity have, as a matter of actual fact, come about through the relating of mathematics to experiment and observation. And Prof. Broad is only enabled to resist this conclusion by introducing the view that in chemistry (and presumably in all sciences) the meaning of the concepts used is discussed only so far as is needful for the special purposes of the science in question, and that when such questions are treated in a thorough and disinterested way we enter the domain of critical philosophy. Thus we read :

‘Chemistry uses the notion of substance, geometry that of space, and mechanics that of motion. But they assume that you already know what is meant by substance and space and motion. So you do in a vague way; and it is not their business to enter, more than is necessary for their own special purposes, into the meaning and relations of these concepts as such . . . Such discussion is incidental to them, whilst it is of the essence of Philosophy, which deals with such questions for their own sake. Whenever a scientist begins to discuss the concepts of his science in this thorough and disinterested way, we . . . say that he is studying, not so much Chemistry or Physics, as the Philosophy of Chemistry or Physics . . .’ (p. 17).

Thus we have presumably to imagine a field which belongs, *e.g.*, to chemistry and yet is logically antecedent to the deepest and most fundamental problems treated in the Quantum theory, a field moreover which does not require for its successful treatment the use of experiment or observation nor (we imagine) any heavy amount of mathematics. We cannot allow that it is probable on the data afforded by a study of the progress of chemistry and physics during the last few years that such a field exists.

We therefore maintain that progress in the fundamental problems of physics and chemistry depends upon mathematics and experiment, and that no part of physics or chemistry in which progress can be made can be treated by the methods of critical philosophy.

Now it must be quite frankly allowed that chemistry and physics

are not typical of all natural sciences, and it is therefore not to be assumed that, if it is allowed that the concepts peculiar to these sciences form no part of critical philosophy, it has also to be allowed that other concepts peculiar to other sciences or used in science generally can form no part of critical philosophy. It seems, however, highly probable that sooner or later the methods which have made important advances possible in chemistry and physics will produce advances in sciences which have not yet reached such a high degree of development. It is quite obvious, of course, that certain sciences such as anthropology and sociology have not yet reached the stage in which a mathematical treatment is imperative. On the other hand it is obvious that in the other important respect the methods used are different from those employed in physics? In physics the experimental work of to-day is marvellous in its accuracy and exacting in its technique. But the most complicated experiments about alpha particles are not essentially different from the simplest experiment in psychology or from the simplest observation. Methodologically speaking, there is no important and fundamental difference between observation and experiment. If therefore Prof. Broad means that critical philosophy has no use for observation or experiment then it is evident that, however backward a science may be, critical philosophy can under no circumstances which ordinarily occur contribute anything to the problem of the nature of the concepts used in that science. There is internal evidence to show that it is possible that this assertion is actually intended. For on page 19 we read 'All conclusions from experiments rest on some of those very assumptions which it is the business of Philosophy to criticise. The experimenter assumes that nature obeys uniform laws, and that similar results will follow always and everywhere from sufficiently similar conditions. This is one of the assumptions that Philosophy wants to consider critically'. Now exactly the same criticisms may be made about observations: if experiments are to be excluded because assumptions as to the uniformity of nature are made, observations must for the same reasons be excluded. On the other hand, if observations are allowed in critical philosophy and not experiment, it will be a matter of difficulty to draw a line between the two.

#### *Scientific Method.*

There are, however, certain other domains which Prof. Broad discusses, which are not related to any one science more intimately than to any other. Such problems as the theory of probability, causality and the uniformity of nature belong here. These topics are distinguished from the special natural sciences by most modern writers by the names *Scientific Methodology*, *Scientific Method* or the *Philosophy of Science*. The topics which make up this domain of knowledge are important since they lie at the root of all other sciences. The methods needed for their successful treatment are



two. The analysis of concepts in this domain is specially important and for this analysis the amount of logical technique required varies. Thus, for example, quite an amount of logical technique is required for the discussion of probability questions. The question of the concepts involved in Causality may require more or less. Its analysis may be merely a matter of simple common sense or it may be necessary to introduce severe logical technique involving even the higher mathematics. Prof. Broad seems to incline to the first view (p. 20). I incline to the second. But whatever the degree of logical technique required, the situation is the same. The concepts must be studied in the light of pure logic.

But, this method of procedure touched on in these expositions is not by itself sufficient. Everything which has been said about the reference to the external world in relation to the special sciences applies, I think, to the problems of Scientific Method. Therefore if Prof. Broad wishes to call this domain a part of Critical Philosophy, he must allow the same methods of testing to be introduced. Whether we are restricted to observation alone is not the fundamental question. There must be reference to the external world. The only difference between this subject and the special sciences will be in the degree to which the questions discussed are fundamental in the fabric of science. It is for this reason that several of the general statements about Critical Philosophy, some of which we have specifically criticised, seem to us to be definitely misleading. The domain of Scientific Method—which we may rename Critical Philosophy if we want to and if there is any good reason for changing the names already established—is an important one; it is not covered by any special science and it is indeed more fundamental than that of any other science. But to assert emphatically that its methods are different from those of the special sciences seems to show a disregard for the side of this subject which is of equal importance with the logical side and which can only be studied by the usual methods of observation and experiment.

D. M. WRINCH.

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*Aristoteles: Grundlegung einer Geschichte seiner Entwicklung.*  
By WERNER JAEGER. Berlin, Weidmann, 1923. Pp. 438.

MR. JAEGER has written a book on Aristotle which may fairly be said to be of first-rate importance, and should be carefully studied at once by every one who takes a serious interest in Greek philosophy. The questions raised have hitherto been almost completely neglected, except for a former book by the same writer on the composition of the *Metaphysics*; the answer we give to them is critical for our whole conception of Aristotle as a thinker; much of the relevant evidence is new, and the author's presentment of it is masterly. On some very important points, in my own opinion, the conclusions are definitive; even where one is inclined to think that the last



word has yet to be said and that it may reverse Mr. Jaeger's finding, the case he presents will at least demand very careful consideration.

Moreover, unlike most of the books which have been written about Aristotle in modern times, Mr. Jaeger's work is never dull; it is often brilliant and its aim is the eminently attractive one of reconstructing the genuine human personality which has for ages been concealed behind the imposing edifice of "the Aristotelian philosophy". If any of us henceforth ventures to make assertions about Aristotle without having taken Mr. Jaeger's fascinating work into account, he will at least be speaking very terribly at his own peril.

As the author says, it is a singular thing that the nineteenth century which composed an enormous literature good, bad, and indifferent, on the development of Plato's thought took no trouble to apply the same methods of study to Aristotle, though the notorious appearances of vacillation on all the most fundamental questions of philosophy in the *Scripta Aristotelis* naturally suggest the explanation that we are dealing with work dating from different periods in its author's life and reflecting very different stages of development. Probably the explanation of the neglect is that given by Mr. Jaeger. The Aristotelian writings which would have revealed most fully the fact that the philosopher had undergone a very remarkable development in the course of his active life are precisely those which only survive in fragmentary later citations, the dialogues of his Academic period. When the publication of the "lecture-MSS." known to us as Aristotle's "works" by Andronicus of Rhodes had produced its effect by creating a school of exegetes and commentators, the dialogues created a difficulty for the exegete precisely because they were found to be in many ways so inconsistent with the lectures. This dislike most probably explains our complete loss of writings which had been so greatly admired in antiquity down to the rise of professional Aristotelian scholarship; it also led to the attempt of the commentators, when they could not ignore the dialogues altogether, to represent them as mere expositions of an official Academic doctrine not really held by their author. In the same way when attention once more began to be paid to the remains of the dialogues in the nineteenth century, the way to a true appreciation of them was blocked by the two equally untenable theories of Bernays, who tried to explain away all the Platonism out of them, and of V. Rose who, admitting the Platonism, asserted that all the dialogues were the forgeries of a post-Aristotelian age. Meanwhile, from the rise of Aristotelian scholarship to the present day, the "system" has successfully concealed the thinker and his history. Our task is by careful critical study to rediscover the features of the man and to decipher the story of his mental development.

We have, in any case, to start by recognising the fact that Aristotle began his career as a whole-hearted enthusiast for Plato and his philosophy. As Prof. Burnet has put it, he was

"carried off his feet" by Plato. We have the evidence of this in the tone of the references to Plato in the famous verses about the altar erected to Friendship by an unnamed Academic, and in the remains of the *Eudemus* and *Protrepticus*, which must have been written while Aristotle was still a member of the Academy and Plato still alive. (And we must remember that Xenocrates accompanied Aristotle on his removal to Assos at Plato's death, a sufficient proof that there was as yet no question of a secession from the Academy.)

Our first business, then, is to understand what "philosophy" and "associating with the philosophy of Plato" meant to the members of the Academy in the last twenty years of Plato's life. As Mr. Jaeger well shows the fundamental bond of union did not lie in the acceptance of this or that speculative formula. "Philosophy" meant first and foremost enthusiasm for a *life* inspired by the vision of the supreme Good, and for Plato as the man who had given the world a flesh-and-blood example of such a life. The remains of the *Eudemus* and *Protrepticus*—Mr. Jaeger skilfully shows that there is much more of the latter embedded in the imitation by Iamblichus than is recognised in the collection of *Fragmenta* by Rose—show how completely Aristotle in his early days had accepted the whole so-called "other-worldly" Platonic doctrines, and the acceptance is proved to be genuinely sincere by the characteristic attempts to make the arguments for the doctrines simpler and logically more cogent.

The turning-point in the philosopher's life, as reconstructed, is the period of three years spent at Assos under the protection of Hermias of Atarneus. The recent discovery of the commentary of Didymus on the *Philippics* of Demosthenes has enabled us to know a good deal more of Hermias and of his relations with the philosophical group at Assos than was possible until very recently. Mr. Jaeger's chapter on this period of Aristotle's history is a very valuable piece of reconstruction, and should incidentally give the *coup de grâce* to all attempts to deny the genuineness of the important letter (*Ep.* vi.) in which Plato introduces the friends Erastus and Coriscus, who formed the nucleus of the little group, to Hermias, who, as we now know, not merely protected them and their native town but placed himself under the tuition of the circle and was led by them to convert his *τυραννίς* into a more constitutional authority. As Mr. Jaeger says, the whole story throws a flood of light on the kind of relation Plato was anxious to establish everywhere between the Academy and practical politicians.

The Assos period must pretty certainly have been the time when Aristotle wrote the dialogue *περὶ φιλοσοφίας*, where his inability to accept the Platonic theory of Forms is first expressly declared. The unmistakable close relations between this dialogue and the *Epinomis* (certainly in circulation as early as 346) prove that the *περὶ φιλοσοφίας* must belong to the months shortly after the death of Plato in 348/7. Since Mr. Jaeger accepts without examination the theory, for which,

as has been shown, e.g., by Raeder and myself independently, there is no real evidence whatever, that the *Epinomis* is the work of Philippus of Opus, his reading of the facts is that Aristotle's dialogue must have been circulated in the very year of Plato's death and the *Epinomis* then hastily written as an attempt to find room for the doctrine of the *περί φιλοσοφίας* in the frame-work of Academic doctrine by the recognition of the *πεμπτόν σώμα*. I own that this order of events strikes me as impossible; in my own opinion, since there is no reason to deny that the *Epinomis* is a substantive part of the *Laws*, I should regard the unmistakable contacts with it in the fragments of the *περί φιλοσοφίας* as showing that Aristotle had the *Laws* and *Epinomis* before him. This would incidentally have the advantage of allowing a more reasonable interval between the actual death of Plato and the circulation of a dialogue which must have been of considerable length, since we know that it contained at least three "books".

In any case it seems clear that in the years at Assos Aristotle was trying to retain the fundamental spirit of Platonic "philosophy" without the specific Platonic doctrine of supersensible Forms, and Mr. Jaeger is thus justified in the attempt to ascertain whether in the vast mass of his extant "discourses" we cannot identify much which must date from this period. This leads to a careful analysis of the *Metaphysics*, *Physics*, *Ethics*, *Politics*. In the main, I think the author is justified in his general conclusions; the evidence I naturally cannot review here. I think he fairly makes out, for example, that *Met. N* gives us an early criticism of Academic views in which it is significant that the main attack is directed against Speusippus; in the criticism of *A*, the Academy is treated more severely but still from the standpoint of a thinker who finds it natural to speak of himself as a member of the school; in *M* yet a third time with still greater severity by one who feels himself definitely outside the school and especially hostile to the form its doctrine has assumed in the hands of Xenocrates, with whom Aristotle must still have been in considerable sympathy at the time of their association at Assos. Again, I feel personally inclined to surrender to the arguments adduced to show that the opening chapters of *A* were originally designed for a course on "first philosophy" in which the subject was identified simply with "theology," "knowledge of the eternal and divine," and that the elaborate discussion of *οὐσία* as such which now fills our books (*Γ*, *E-Θ*), belongs to a later revision in which the point of view has been completely changed and "substance as such" has taken the place of God as the adequate and appropriate object of philosophical cognition. So I cannot avoid assenting to the view that while most of what we now know as *A* of the *Metaphysics* belongs to an early date at which Aristotle is engrossed simply in the thought of the one eternal fount of life and motion, *A8*, the chapter about the movers of the planetary spheres, which can be readily detected as a later insertion breaking the thread of the argument, is really

quite inconsistent with the tone of all that has preceded and indicates a frame of mind in which the "mover," who had at first been an object of religious contemplation, has come to be little more than the "unknown  $x$ " required for the solution of a problem in mechanics. Another view which I find it hard to resist is that the—to me—very attractive *Eudemian Ethics* are the original Aristotelian *Ethics* and owe their well-known "other-worldliness" of tone to the fact that the work dates from the days when Aristotle is still trying to "salve" the φιλοσοφία of Plato minus the doctrine of the Forms. If Mr. Jaeger's contention that the *Politics* throughout refer only to the Eudemian, never to the Nicomachean, *Ethics*, is sound, this would, indeed, amount to demonstration of the thesis. I may mention, as minor points of interest in the treatment of Aristotle's earlier years, the interesting suggestion that the pseudo-Isocratean *Demonicus* is a reply by a member of the school of Isocrates to the *Protrepticus*, in which, as we see from the extant remains, Aristotle had insisted on the Platonic thesis that knowledge of the eternal and superhuman Good is a necessary foundation for statesmanship, and the very attractive remark that since we now know Hermias to have been acting in concert with the plans of King Philip for an attack on the Persian monarchy, the selection of Aristotle as a tutor to Alexander not improbably had a rather important political motive. The husband of Pythias might be welcome at Pella for reasons which would not appear on the surface.

If Mr. Jaeger is right in his main contentions, it will follow that not much of what we call the "works" of Aristotle will belong, as respects the date of first composition, to the thirteen years of his activity in the Lyceum. This would be in any case probable, since the great collections of facts and observations, such as those which made up the 158 sketches of πολιτεῖαι, can hardly have been produced except in a centre of intellectual life in easy touch with places where special investigation would need to be made, nor at a time when the responsible "editor" of the work could not command the labour of a good many competent and willing assistants. The list of archons and the record of theatrical διδασκαλῖαι, again, could not well have been framed anywhere but in Athens and from official sources, and in the case of the list of Pythian victors drawn up by Aristotle and Callisthenes, the known date of the departure of Callisthenes for the East together with inscriptional evidence definitely shows that the work must have been done during Aristotle's last residence in Athens. The duties of teaching and the labour of compiling these records of fact would clearly leave very little time for any other undertaking. Thus it seems clear that the once current view that Aristotle's "philosophical writings" belong mainly, or even largely, to the last period of his life must be abandoned. The period at Assos, too often forgotten by most of us, must have seen the inception and the composition of the first draughts of most of these works.

The general effect of Mr. Jaeger's striking effort of combined

scholarship and literary imagination is thus to reveal Aristotle to us as a thinker who passed from an early Platonic "other-worldliness," through a phase in which the desire of his heart was to retain the Platonic inspiration without the necessary intellectual foundation, to a final phase in which "positive science" has taken the place of the old metaphysics and theology. Probably we have all felt vaguely in our own reading of Aristotle, that his personal history must have been of this kind, but evidence so cogent as that of Mr. Jaeger has never before been presented. There is one general observation that seems to me to be pertinent. Mr. Jaeger is convinced that the development he traces is from first to last "progress". So no doubt it is, if you assume that expert knowledge in the special sciences *plus* agnosticism about all that is non-phenomenal is the true goal of the intellect in quest of truth. But that is, after all, a dogmatic assumption. It may be that the assumption is false. The intellect seems as if it were made to "know God"; at least, it is certain that it has never acquiesced long in the conviction that the knowledge of Him is impossible, and if one has really persuaded one's self that "departmental" science is all the knowledge attainable, it is not a long step to weariness of what we cannot help feeling to be a rather frivolous pursuit and the degradation of knowledge into a mere instrument to "utility". So, in the sphere of "practice," Mr. Jaeger traces Aristotle moving from Platonic "idealism" to a *Realpolitik* which is based on mere empirical observation and has "no use for" the ideal city or the philosopher-king. I should have thought the past ten years had taught all reflective men in Europe to be at least sceptical of the value of *Realpolitik* and *Realpolitiker*. There is a point of view from which the "progress" of Aristotle appears as the tragic story of a man who is gradually losing his soul, and "what shall a man give in exchange for his soul"? Not all the *Spezialwissenschaften* of the ages. It is at any rate significant that it is just by the "Platonic" conceptions still retained in the work assigned by Mr. Jaeger to the years at Assos that Aristotle has exercised his permanent influence over the minds of his most devoted later admirers. What, *e.g.*, would St. Thomas have found in Aristotle without the Platonic conception of the one "unmoved mover"?

My aim in these remarks has been not so much to criticise as to call attention to the outstanding importance of Mr. Jaeger's book. One consideration, however, I will venture by way of criticism. I think he has not been sufficiently cautious in his initial reconstruction of the *ethos* of the Academy in the years 367-347. He makes it too exclusively "other-worldly". He seems to forget that Plato's great practical attempt to change the face of history, his intervention at Syracuse, and his great monument of intensely practical wisdom, the *Laws*, belong to this period. The note of detachment is struck in the *Laws*, but Plato's detachment is compatible with the keenest sense of the importance of standardising

weights and measures, of seeing that children play the right kind of games, of organising secondary schools on proper lines, of finding a method of election which will ensure fair representation of all social classes and exclude the risk of jobbery, of codifying the laws great and small, and the like. If Plato is in some ways like the great monastic saints, he is like the greatest of them in showing a singular practical shrewdness and capacity for "business". The ideal of the purely "contemplative" life is not his, and it is not likely that Aristotle learned it in the Academy. His typical contemplative is not Plato, but the Ionian Anaxagoras; and there is something un-Attic in the unmeasured exaltation of the type, something which reminds us that Aristotle was himself no Athenian. In connexion with this misconception, as I must consider it, stands the view, expressed by Mr. Jaeger, that the famous apologue of the "three lives" itself is of Academic origin and due to the impression made on Eudoxus and his contemporaries by the personality of Plato. If that were so, I do not understand how it could be employed, as it clearly is, as something needing no explanation in both the *Phaedo* and the *Republic*, or how Posidonius came to assert in so many words that the conception really was Pythagorean. And are not the "lives" clearly referred to in Heraclitus, *Fr.* 111 (Bywater)? Also I think the same view about the aims of the Academy leads Mr. Jaeger to depreciate unduly the extent to which "positive science" was cultivated among them. No doubt the biological work of Speusippus had as its chief aim the making of a classification of species. But it seems to me very arbitrary to declare that this is not a properly scientific aim, and on that ground to assert that no one before Aristotle had studied biology in the genuine spirit of the scientific biologist.

A. E. TAYLOR.

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*Le Pragmatisme Américain et Anglais: Étude Historique et Critique: suivie d'une Bibliographie Méthodique.* By EM-MANUEL LEROUX. Paris: Librairie Félix Alcan, 1923. Pp. 429. Price, frs. 17.50 net.

THIS critical study of pragmatic philosophy, as it appears in the works of its principal exponents, chiefly—but not exclusively—in America and England, is admirable alike in substance and temper; and will undoubtedly rank as the standard work on the subject. The exposition, in the first two parts (to p. 256) dealing respectively with the rise and development of pragmatism, is not more remarkable for lucidity than for fine discrimination and insight. Whatever there is of real obscurity or hesitancy in the theories reviewed is neither ignored nor exaggerated. Nor is there any attempt to substitute identity for affinity of doctrine as between James, Dewey and Schiller. An interesting and sufficiently full account is given of Charles Peirce (pp. 91-96, and pp. 169-181), who first provided

'pragmatism' with its not very attractive name, and with a verbally precise, if too narrow, formula. But the author is not misled by James's generous recognition of Peirce's originality into exaggerating this writer's influence on James. The man to whom James, as M. Leroux reminds us, may almost be said to stand in the relation of disciple is Renouvier. The doctrine of the Will-to-Believe, in particular, is almost pure Renouvierism (pp. 44-46 and pp. 84-89). But whereas, for Renouvier, the will has to choose between equally 'rational' alternatives, in the formation of which it has had no part; James, as psychologist, makes *purposive selection* the primary function of mind, as such. He thus breaks down that arbitrary and hopeless disjunction of will and intelligence, which makes of the former something purely individual and 'subjective,' and of the latter something purely universal and 'absolute'. Individuality *plus* teleology forms, in fact, the key-note alike of James's psychology and his philosophy.

"Ce qu'il met en relief, c'est l'action de la spontanéité individuelle en général, qu'elle se présente sous forme obscure ou sous forme réfléchie. Mais cette spontanéité, il nous la montre à l'œuvre d'un bout à l'autre de la vie intellectuelle. Elle préside à la formation de nos concepts les plus humbles, et de nos perceptions mêmes" (p. 86).

"Croyance n'implique point exclusion du doute, comme le supposait encore Renouvier, mais simple fixation de notre conduite ou de nos recherches autour d'une idée jaillie dans notre esprit. La croyance ne reçoit pas d'emblée une valeur de connaissance; elle acquiert cette valeur peu à peu, grâce aux confirmations que lui apporte le cours de l'expérience. Ainsi en est-il également des hypothèses scientifiques, et des principes mêmes" (p. 88). What M. Leroux evidently has here particularly in mind is the last chapter of James's *Principles of Psychology*, the philosophic importance of which—as indeed of the *Principles* as a whole—was so long ignored by those philosophers who took for granted that 'Psychology' and 'Associationism' must be convertible terms.

The third and final part of M. Leroux's study is entitled "Valeur du Pragmatisme". Sympathetic as the author is to the pragmatic movement, this part, nevertheless, contains much shrewd, and helpful, criticism of pragmatism as a metaphysic. But it is to be hoped that in a future work, or in a future edition, M. Leroux may pay more attention to the pragmatic movement in *logic* as distinct from an outwardly more ambitious metaphysic. Admirably clear as is his account, within its limits, of Mr. Alfred Sidgwick's logical work (p. 123), it is too brief to do full justice to Mr. Sidgwick's illuminating contention that "meaning is application"; and he makes no allusion to the devastation wrought in the ideals of Formal Logic by this writer's profound study of the nature and logical effects of *ambiguity*. Almost the only fault of M. Leroux's book lies in the insufficient prominence given to the problem of distinguishing real from sham meaning.



In the *logic*, at any rate, of pragmatism the emphasis falls throughout on the problem of meaning rather than on the 'problem of truth'. It attacks the latter by way of the former. What complicates the problem is that while the question what any particular assertion really means, when once the question has been effectively raised, must take logical precedence over the question of truth; yet any real definition of meaning must take account of its *aim*, which is truth. To take as our goal something at which it is *reasonable* to aim, is what pragmatism, in the last resort, means by being 'practical'. Conversely, it refuses to accept as reasonable any definition of 'truth' which makes it, in principle, unattainable by *us*. That is its answer to the disguised scepticism of 'Absolutism'. Only that, it maintains, has real meaning, the truth or falsity of which makes some recognisable difference *to us*.

The practical importance of a critique of meaning is borne in on us by the remarkable tendency of meaning to evaporate completely in any discussion of 'first principles'. This tendency is one which philosophers have been slow to recognise. Formal Logic, indeed, so far takes meaning for granted, as to assume that it may safely be neglected altogether in the theory of argument: for the 'matter' from which it abstracts is only another name for meaning. To gauge the value of the resultant conception, or ideal, of 'formal validity,' we need go no further than those 'laws of thought' which 'in attempting to deny we really affirm'. These are indeed, 'indisputable' in so far as they are merely formal and devoid of real significance. But this verbal indisputability, as seems invariably to be the case with 'indisputable truths,' is simply the lifeless shell into which naked error, like the wily hermit-crab, may creep at the first threat of attack. The more pernicious the error, the greater the need for the security which such subtle ambiguity affords. Nothing can be more completely indisputable than that which has no real meaning at all.

In *practice*, the three Laws of Thought form a perfect triangle, or closed system, of self-supporting absurdity. (i) To take first that pillar of intellectualism, the Law of Contradiction. On the face of it, it lays down that self-contradiction is *impossible*, alike in thought and reality. But in that case we need obviously take no trouble to *avoid* self-contradiction; and all 'self-contradiction' must be merely apparent. This 'law' in fact conceals, rather than proclaims, that real self-contradiction is destructive of *meaning*, inasmuch as nominally to embrace two mutually exclusive alternatives is really to espouse neither: it conceals, rather than proclaims, that significant assertion, whether true or false, involves a *choice of alternatives*. It conceals, therefore, the difficulty of combining 'necessity' with significance.

It has been claimed for this Law of Contradiction that it affords, at least negatively, an 'absolute criterion' of Reality. On the contrary, it is in its very nature incapable of helping us to select the *right* alternative, or truth, in any logical situation whatsoever. It does not even afford any criterion for distinguishing between



real and apparent self-contradiction. Its value in this particular respect is accurately gauged by the fact of its having been invoked as justifying the assertion that all significant assertion, all human truth, is *necessarily* self-contradictory: surely an overwhelming refutation of, rather than a conclusion from the 'principle' that self-contradiction is *impossible*; but quite obviously of no other logical value or significance.

(ii) The Law of Identity does something more than condone the unmeaning. It positively glorifies the unmeaning in its most ridiculous form, that of tautology: makes of it, indeed, in that form, the exemplar of 'absolute truth'. Which, to be sure, it must be, if 'indisputability' is the same as 'truth'.

(iii) The Law of Excluded Middle completes the system by formally *excluding* the unmeaning as a *tertium quid* to the dichotomy of true and false. And, no doubt, it is true that for anyone who (a) accepts an 'indisputable' truism as *true*, and (b) regards a genuine self-contradiction as typically *false*, the unmeaning simply does not exist. *Per contra*, to interpret this third 'law' merely as a formal presentment of the *condition precedent* to significant assertion—the condition, namely, that there must be genuine alternatives—would be to admit the non-significance of the Law of Identity, and the muddle-headedness of the Law of Contradiction.

These considerations perhaps make it intelligible that, *e.g.*, Mr. Bradley should declare: "I do not think that where a further alternative is possible a disjunction is complete. But I have always held, and do hold, J. S. Mill's idea of the Unmeaning as a third possibility to be the merest nonsense".<sup>1</sup> But, unfortunately they do not make this last remark intelligible in any logically relevant sense. For we can hardly suppose that Mr. Bradley intends to condemn J. S. Mill's suggestion as *meaningless* nonsense. On the other hand, it is difficult to see how he can mean anything *else*.

And yet a few lines further down, Mr. Bradley himself rejects a certain idea as "utterly unmeaning," in a way that seems to be something more than a mere *façon de parler* . . . (*viz.*: "the idea that, so far as our knowledge is absolute, we can rationally entertain the notion of its being or becoming false").

Furthermore, the reflexion cannot escape us that it would be strange indeed if in this deceptive world of ours meaning should be the one thing which is always reality, and never appearance. That the need for distinguishing between appearance and reality in this matter of meaning should be roundly denied, or apparently denied, by a philosopher of Mr. Bradley's eminence, seems merely to emphasise the crying nature of the need.

"Take care of meaning, and truth, in the end, will take care of itself," may, then, for rough and ready purposes, be taken as the motto of pragmatism. But to say that pragmatists have discovered a real and fundamental problem in philosophy, of apparently a more 'practical'—which in this context means 'soluble'—nature

<sup>1</sup> *Appearance and Reality*, 2nd ed., p. 618 (in "Explanatory Notes").

than most; or even to say that they have made valuable contributions towards its solution, is not to claim that they possess the whole truth and nothing but the truth. Even if it is admitted that we make truth in so far as we make the meanings out of which truth arises in the process of 'experiential verification,' yet, as M. Leroux well shows, many doubts and difficulties arise when we press for an adequate definition of 'verification' and 'experience'. Fleeing from the Deep Sea of an alien and immovable 'objective reality,' we are in danger of falling into the arms of the Devil in the shape of solipsistic subjectivism. M. Leroux's criticisms under this head are certainly not lightly to be set aside. But this recurrent dilemma presses less hardly on a philosophy which, like pragmatism, is tolerant of partial solutions and tentative theories, than on any philosophy of the absolutist type.

M. Leroux suggests that pragmatists are apt, rather inconsistently, and in their own despite, to set up an ideal of absolute truth *within* human experience; and to accept this ideal is, he maintains, to lapse into pure subjectivism—which logically involves solipsism. Meaning is not merely prediction of particular events. It is always interpretation; an interpretation, which, in its very nature, always goes beyond what is barely given in experience, and which, of course, reacts on experience itself.

"Les pragmatistes semblent avoir accentué d'une manière un peu factice la différence qui existe entre l'état initial de la connaissance et son état final, entre la vérité *claim* et la vérité *validity*. En fait, la vérité ne demeure-t-elle pas toujours en quelque mesure, un *claim*? Contre la prétention de réduire la vérité à une relation empirique, c'est l'expérience même que nous invoquons ici; et dans cette expérience nous nous contentons de souligner une fois de plus un aspect signalé par les pragmatistes eux-mêmes, cette faculté de foi grâce à laquelle l'esprit s'élance bien au delà de son expérience passée. Ce précieux don d'initiative, que l'empirisme avait si lourdement méconnu, les pragmatistes, par moments, en amoindrissent eux-mêmes l'étendue. Poser la vérité d'une idée, même vérifiée, c'est toujours dépasser cette vérification: car c'est, par une hypothèse toujours hardie, attribuer à une expérience limitée une valeur universelle" (pp. 317-318).

The truth seems to be that all that is most valuable in pragmatism is indifferent to, or at any rate cuts across, the ancient (and possibly meaningless) antithesis of 'Realism' and 'Idealism'—especially as that antithesis appears in current trans-atlantic philosophy. But in so far as pragmatism is identified with 'radical empiricism,' it does in point of fact take sides in that controversy: it is anti-realist. 'Idealism' is more obviously paradoxical and uncanny than 'Realism'; and for this very reason appeals strongly to that intensely human desire to 'make our flesh creep,' which is perhaps the last infirmity of noble minds in philosophy.

We must, in conclusion, thank M. Leroux for the very complete and well-arranged Bibliography of the subject (pp. 335-418).

HOWARD V. KNOX.

## VI.—NEW BOOKS.

*Three Chapters on the Nature of Mind.* By BERNARD BOSANQUET.  
London : Macmillan & Co. Pp. vii, 159. 6s.

THIS little book contains all that was completed of a larger work on this subject on which Dr. Bosanquet was engaged at the time of his death. The book was to have been in the main constructive. But Dr. Bosanquet followed the Hegelian method—which is perhaps in these cases the best possible method—of leading up to the exposition of his own views by an examination and criticism of other views which he regarded as wrong or inadequate. It is this critical introduction which is contained in the present work.

The first chapter deals with what mind is for the biographer or the novelist. And the fact that a special chapter is devoted to this point of view at once marks off Dr. Bosanquet's treatment from the ordinary run of works on this kind of subject. It is worth noting in this connexion how utterly wide of the mark are the criticisms directed against Absolutism of the type represented by Dr. Bosanquet on the ground of its being "abstract" or "remote from real life". In point of fact, it is just the strength of this school of thought that it is so firmly based on the concrete experience of real life as found in history or in social and political activities, and expressed by the biographer or in the work of art and literature. Just as, if one may venture to say so, its chief weakness seems to lie in the difficulty it has in dealing satisfactorily with really abstract thought, such as we find in mathematics and in many other branches of science. It is noteworthy that the most effective criticisms of Absolutism have come from that direction.

As we should expect, we find Dr. Bosanquet very sympathetic towards the point of view of the biographer and the novelist. He criticises it as inadequate in so far as it tends to think of a mind in the main as identical with a consciousness. But at the same time he points out that, in practice, the biographer or novelist who knows his business does full justice to the latent and unconscious tendencies of his subject, and also to the extent to which outside circumstances or previous history have to be taken into account if we really wish to know and understand the individual person. This is one of the ways in which, as he says, "the impulse of the biographer bears witness to the seamless continuity by which the individual passes into the universe". A further merit of this point of view is its appreciation of the importance of purpose for the life of the individual and of enjoyment or "the æsthetic aspect of experience".

But the particular strength of this point of view, for Dr. Bosanquet, lies in the way in which it "is kept sane on the problem of unity". It cannot help regarding its subject as a unity, and has no temptation to indulge in theoretical analysis and abstraction. But it does not regard this unity as depending on or involving any "pure ego" distinguishable from its experiences: it takes the unity to lie, rather, in the inter-connexion and inter-penetration of these experiences. Nor does this point of

view ever have any use for the idea of a bare "act" of the mind distinct from its "content" or its "object". Consequently it "does not refine upon the distinction between the mind and its objects". It rather regards the man's knowledge and experience as "in" him and part of him. There is a danger of this developing into the mistaken view of the mind as a mere receptacle or container of what it knows. But always it serves to make us realise the difficulty of supposing that what is known does not affect the nature of the mind that knows it. Dr. Bosanquet speaks of some kinds of object known as becoming "one with the very nature and structure of the mind".

The second chapter deals with the mind on what Dr. Bosanquet calls the Brentano-Meinong basis. This indicates any view which is based on the familiar threefold analysis into act, content, and object. One may suspect, though Dr. Bosanquet does not say so, that this is the point of view with which he has least sympathy. His criticism of it proceeds in the main on familiar lines. He will have none of the bare act, which he dismisses briefly—too briefly, some of us may think—as undiscoverable by introspection and indeed "wholly unintelligible and incredible". This differentiates his view fundamentally from a Realism of the type of Prof. Alexander's. But in his criticism of the distinction between content and object he has much in common with modern Realism. And he presents in admirable fashion the view, which most Realists would share, that the "content" is an unreal abstraction, which serves only as an obstacle between ourselves and the real objects about which we are thinking and which we are trying to know.

The third chapter, which occupies more than half the book, is devoted to an examination of the views expressed by Mr. Bertrand Russell in his *Analysis of Mind*. It contains a masterly criticism of the view which "can discover in mind nothing but trains of particulars". And in a detailed examination of "four central cases of mental functioning"—Belief, Memory, Meaning and Thought—he shows how impossible it is for such a view to give an adequate account of them. It is faced by many of the difficulties of the Brentano-Meinong view, into which in some connexions it would naturally develop, and has in addition special difficulties of its own. In the course of this exposition there are trenchant criticisms of other vagaries of Mr. Russell, in particular of his very narrow and abstract idea of logical connexion and coherence. But the chapter is far from being all criticism. Full justice is done to the stimulating originality of Mr. Russell's treatment. And it marks, for Dr. Bosanquet, a real advance on the views considered earlier, in that it no longer treats mind as identical with consciousness and realises the essential identity of the working of habit and universal thinking. Even the view that we can discover nothing in consciousness but trains of particulars is valuable in so far as it prevents us thinking of universals as just one sort of object alongside of the particulars, instead of as the form or order in which these particulars are arranged.

Dr. Bosanquet's own views are here, of course, still those with which he has made us familiar in his other works. But they are only to be gathered by occasional allusions where they are contrasted with the views criticised. The fundamental process is thought, which is something much wider than any one kind of conscious process. It is "the self-assertion of reality according to its characteristic laws within a complex of psychological matter which may be called a mind". Or again, "thought is the control of mental process by the real object". The conscious processes which we usually call thought are but one form of this, just as the formation of habits and the working of instinct are others. The special relation of this to consciousness is one of the questions which are reserved for

fuller treatment in a chapter that was never written. And we can, therefore, say no more than that the chapter on this subject is perhaps the one that we miss most in trying to appreciate the true force of Dr. Bosanquet's argument. Otherwise, it is astonishing how nearly this fragment of a book itself constitutes a complete whole. We do not know whether Dr. Bosanquet planned any further critical chapters. One would have been particularly glad of a treatment of mind according to Prof. Alexander, whose views would have afforded both striking resemblances and striking contrasts to Dr. Bosanquet's own.

An examination of these positive views would involve a discussion of Dr. Bosanquet's whole position. And one cannot criticise an unfinished work for omissions. There is one point which might be considered when a new edition is called for. Would it not be possible to add, if not an index, at least an analytical table of contents?

It would be an impertinence to praise what there is of the book. All that needs to be said is that it shows as fully as any of his work the great qualities which placed Dr. Bosanquet at the head of contemporary British philosophers. And this foretaste of what we might have had, if he had lived, can only intensify, if that is possible, our sense of loss at his death.

G. C. FIELD.

*Histoire de la Philosophie orientale.* By RENÉ GROUSSET. Paris, Nouvelle Librairie Nationale, 1923. Pp. 376.

*Indian Philosophy*, Vol. I. By S. RADHAKRISHNAN. London, G. Allen & Unwin, Ltd., 1923. Pp. 684.

*Buddhist Philosophy in India and Ceylon.* By A. BERRIEDALE KEITH. Oxford, Clarendon Press, 1923. Pp. 339.

*The Bhakti Cult in Ancient India.* By B. KUMAR SHASTRI. Calcutta, B. Banerjee & Co., 1923. Pp. xxxix, 411.

*Old Creeds and New Needs.* By C. A. F. RHYS DAVIDS. London, T. Fisher Unwin, 1923. Pp. 193.

Western scholars appear to be taking an increasing interest in the thought and culture of the East, and the books now published in this connexion as a rule manifest a more detailed and systematic treatment than the works of even ten years ago. With good reason the publications of Indian scholars in the past were regarded as comparatively unscientific, but some recent works suggest that we are now entering upon a stage in which we may hope to have really scientific studies from them. Such, for example, is Prof. Das Gupta's *History of Indian Philosophy* (Cambridge, 1922, vide MIND, Jan., 1923, p. 93) which must, in my opinion, be regarded at present as the standard work on the subject. There are, however, certain difficulties which ought to be explicitly recognised which tend to vitiate much of the work in this realm. With greater production by diverse minds many of the defects will probably tend to correct one another and a more correct and adequate account be obtained. It seems necessary to note some of these difficulties so that the defects to which they may lead may be guarded against. Passing over the great initial difficulty that the texts are in various languages and dialects and that, all too often, the persons most qualified linguistically are not of a distinctly philosophical type of mind and fail to grasp subtle shades of meaning, there are two other obstacles to right comprehension and exposition. Western scholars, and many Indian scholars of our time (trained on

Western methods and frequently the most scientific in their procedure) tend to look at Indian thought and methods through Western spectacles, seeking for problems and solutions such as they have come to consider as of fundamental, if not sole, importance in the course of their Western training. Amongst Hindu students there is very frequently quite a different tendency, but one equally unfortunate. For long there has been (and still is) at least lip-service or indolent acquiescence in the traditional singularistic monism, the *advaita Vedānta*, of Śaṅkara: and the tendency is to view all Indian systems from that standpoint, all too often with a dogmatic and only pseudo-philosophical exposition. The situation is similar to what we might have in the West if almost all our philosophical systems were described from the standpoint of a Roman Catholic Thomism. One other point is worthy of mention. As in the history of philosophy in the West, only more so, the same term is used in different systems and sometimes in the same system, with a variety of meanings. Curiously enough the varied renderings in English by which Prof. Das Gupta (*op. cit.*) brings out the diverse usages were adversely commented upon in the review in *MIND*. But it was this which struck me immediately as one of the excellences of his book, and one which makes it invaluable to the Western student of the subject.

Considering these difficulties and the vastness of the subject, M. René Grousset's volume is exceedingly well done. It may without much hesitation be said to be the best brief introduction to the subject. Further, its very full bibliographical references in paragraph notes at the commencement of each section make it an admirable guide to detailed reading. The work is not in strictly chronological order and many movements are quite summarily or not at all dealt with, as, *e.g.*, Jainism. M. Grousset's exposition is interesting, and I venture to believe important and on the right lines, in that, while allowing an appearance of predominance to *advaitism*, he does not permit this to warp his judgment of the actual developments of Indian thought. He contends, correctly, I maintain, though in opposition to the prevalent view, that Indian thought reached Theism (1) through the *advaita Vedānta* and the re-actions to it due to the vital necessities of the spirit; (2) through the Sāṃkhya philosophy and the reaction to it expressed in the Yoga system. Similarly he considers that Buddhism developed through the Mahāyāna schools to its most living present form, the Theism of Amidism. To substantiate these views requires a much closer treatment than M. Grousset gives, but he has at least indicated the way of approach. His contention is a distinct challenge to those who assert that God is merely extraneous and of no real significance in the Yoga system. It is partly because of the theistic trend of its own philosophical and religious developments that Islam and Christianity have been able to exert considerable influence on movements within Hinduism.

Prof. Radhakrishnan's survey is on a much larger scale. Of a study of so vast a field it may seem ridiculous to say that it might with advantage have been more compact. The author's pen is perhaps too facile. Nevertheless, the easy style and the more general character of the exposition will make the book more attractive to the ordinary reader than the more severely technical work of Dr. Das Gupta. It is marked by its attention to literature which has been much neglected in such surveys. It is shown, for example, that the Indian epics—especially the *Mahābhārata*, even apart from the well-known section, the *Bhagavadgītā*—have a significance for the student of Indian philosophy, particularly on its ethical side. The author has endeavoured with much success to systematise the material of the different sections under headings representing philosophical disciplines as known in the West, as for example, theory of knowledge, psychology, logic, etc. This will make it more useful for cross

references by Western students. I hope—though I doubt it!—that Prof. Radhakrishnan will not regard me as misrepresenting him, when I say that his treatment seems to have one of the defects mentioned above: that of viewing the whole through the spectacles of the *advaita Vedanta*. Some of his suggestions of parallels with Western thought must not be understood too literally: some are distinctly open to doubt, as, for example, those between Bergson and Buddhism. And we surely have reason to demur when, after asserting that "The modern pessimistic philosophy of Germany, that of Schopenhauer and Hartmann, is only a revised version of ancient Buddhism," he goes on to say: "Early Buddhism suggests the outline of a philosophy suited to the practical wants of the present day, and helpful in reconciling the conflict between faith and science" (p. 342).

It is to be regretted that in the preparation of his sections on Buddhism Prof. Radhakrishnan had not the use of Prof. Keith's *Buddhist Philosophy*, which appeared only after his own book was in the press. Valuable as Mr. Radhakrishnan's work is, a comparison of its account of Buddhism with that given by Dr. Keith will show at once that the present need is primarily for detailed investigations of individual fields. One may say without hesitation that Dr. Keith's book is a landmark and a turning-point in the English literature on Buddhism in India and Ceylon. On oriental thought one other recent book alone is comparable with it as a faithful survey of a particular field: Dr. Estlin Carpenter's *Theism in Mediæval India*. Dr. Keith acknowledges the contributions made by the late Dr. Rhys Davids and Mrs. Rhys Davids, but in many things is much opposed to, sometimes unduly scornful of, their interpretations. He is amply justified in his rejection of the tendency to describe early Buddhism as though it were a simple straightforward rationalism, and the attempt to interpret much of it along lines similar to the psychological ideas of Croom Robertson (whom he does not mention). Nevertheless, his attack on the humanistic representations of the Buddha as given by Oldenberg and Rhys Davids does not convince me. Dr. Keith maintains (1) that the earliest texts are very late; and (2) that we are not justified in regarding the ascription of a transcendent character to the Buddha, and his own apparent claim to such character, as later than other factors or necessarily as merely secondary. He appears to me to do insufficient justice, even if any justice at all, to the view he opposes. It may reasonably be contended that most of the earliest texts, including the so-called supernatural elements and much of the doctrine and practical code, were gradually developed from very simple beginnings. For a parallel it would be better to point not to Krishna but to Jesus: for both Jesus and Buddha, it appears to me that the beginnings of—call it idealisation or deification as one will—may be traced. There are apparently two strands: for example, in one Gautama has to strive as any ordinary man to attain enlightenment, after years of search; and in the other he is a transcendent being who comes from a transcendent realm to bring the truth: in one his former friends treated him with scorn, in the other they rose to honour him as though of more than human character. We are, in fact, here in face of a problem of social psychology and of history, and both give support to the theory of gradual idealisation.

For a correct understanding of the Buddhist attitude—and one may say of Indian philosophy and religion in general—it is important to note that the Buddha, like the *rishis* or sages of the Vedas, grasped the truth by what we have no other term to express than *intuition*, even though reflexion may lead up to it. "The Buddha attains enlightenment in a complete intuition, the fruit of a long process in which he has overcome all forms of empiric knowledge, and the way of intuition lies open for the



disciple, and indeed must be followed if the end is to be attained. Hence it is essential and proper to develop the capacity for winning such visions . . . " (p. 39). Whatever the position of the Buddha was as to the "self," the denial of the "self" was certainly regarded as orthodox, but at the same time there was felt a necessity for a real link of connexion (i.e., to accord with the doctrines of *karma* and *rebirth*). Some, however, accepted the conception of a true person (p. 81). In contrast with the frequent modern insistence on the doctrine of causality in early Buddhism, Dr. Keith shows that there the essential idea is simply that contained in the second of the Four Noble Truths. The twelvefold causal chain is a later development, the interpretation of which is highly debatable. It is not meant to tell of physical causes, but as an explanation of misery. In the past Buddhism and Jainism were not infrequently confused, or Jainism was regarded as an off-shoot from Buddhism. Such treatment has now been generally abandoned. It may nevertheless be said that the similarities and the differences between these two are sufficiently striking to demand a consideration of the question as to their relation, if any. Dr. Keith, who gives a careful consideration of the relation of Buddhism to Samkhya and Yoga, entirely neglects this problem. He raises the important question of the original element in Buddhism and seems somewhat vaguely to suggest that it consisted in the commanding personality of the Buddha; the reality of the conviction of misery in Buddhism; the superiority of its moral training; and the warmth of its missionary enterprise as compared with the cold intellectualism of the Samkhya and Yoga. A much more detailed discussion of this significant problem has more recently appeared in M. Oltramare's *Théosophie bouddhique* (Paris, 1923, pp. 502-520). Part IV. of Dr. Keith's book is devoted to a historical sketch of Buddhist Logic.

Studies of subjects such as that of Prof. Shastri's *Bhakti Cult in Ancient India* should do much to counteract the temptation to give a rationalistic and intellectualistic impression of Indian philosophy and religion. They might also give considerable support to the theistic interpretation of the development, as suggested by M. Grousset in the work referred to above. Unfortunately Mr. Shastri's work is disappointing and hardly to be recommended, in that he has fallen a victim to a common Indian failing, vague verbosity. His work is useful in emphasising neglected, and correcting misrepresented, aspects of Indian thought. Thus he rightly insists that the doctrine of *karma* does not deny free choice, but implies that there are conditions within which the choice is limited. Again it certainly is necessary to show that *ananda* or joy is just as definitely a constituent of reality for Hinduism as *sat* and *chit*, truth and consciousness. The doctrine of *Bhakti* is at one with the fundamental principle of Indian philosophy and religion in maintaining that the eternal attributes of God can be truly realised by man only by the combined functional activities of the human soul, that only as a partner in the divine life can reality be truly comprehended. It may (many Western thinkers notwithstanding) be maintained with good reason that it is not only for Indian thought and religion but for all philosophical thought and religion, that "highest truths, unknown and unknowable otherwise, flash upon the saintly mind in the highest stages of spiritual culture". "This is the sum and substance of the views of valid testimony or *Pramanavada*, as we gather from the whole orthodox philosophical literature of the Hindus" (p. 40).

If Indian Philosophy can help to break down the partly conscious, partly subconscious prejudice of so many Western thinkers of looking upon sense impressions and inference in relation to such impressions as the only source of objective truth, all else being as though merely sub-



jective feeling, it will aid in a broadening and deepening of some of the schools of philosophy which to-day in the West tend to assume a public attention out of proportion to their worth. That is not to say that complete satisfaction and enlightenment may perchance be obtained by knowledge about oriental systems. Such an idea is in fact in contradiction to their fundamental teaching as to the apprehension of the truth, which is not through any merely intellectual reflexion but by moral and religious training and mystical insight. In her book, *Old Creeds and New Needs*, Mrs. Rhys Davids considers the question of the values of the older creeds. She thinks that the vital teachings of their founders, of whom she takes as examples, Zarathustra, Gautama Buddha, Jesus the Christ, and Muhammed, are now part and parcel of human thought and ideals, but that there are new needs which they do not meet. The studies she gives of these teachers are all too slight and inadequate. The new needs are still more briefly treated. They do not seem particularly new. Nevertheless it is interesting to learn what Mrs. Rhys Davids regards as new needs. They are concerned with a knowledge of a wider life uniting "this world" and "the next," which will not only do away with the "fear of death, the anguish of bereavement, and the apparent futility of so much dying," but also lead men to the "Highest and Best which we name God". The author looks forward to a new teacher with a new revelation to satisfy these needs. With a passing disapproval of "the irresponsible stuff that passes through the mouths or the writing hands of so many squalid paid 'seers' among us to-day," she urges a "concerted action of the best," in an effort for light.

ALBAN G. WIDGERY.

*The Domain of Natural Science* (The Gifford Lectures delivered in the University of Aberdeen in 1921 and 1922). By E. W. HOBSON, Sc.D., LL.D., F.R.S. Cambridge University Press, 1923. Pp. xvi + 510. Price £1. 1s.

At a time when so much philosophical writing is concerned with tentative adumbrations of new lines of approach to old problems, it is refreshing to read a careful and scholarly attempt to work out in detail a doctrine which in its essential features is devoid of novelty. The central aim of these lectures is described by Prof. Hobson in the Preface: "What is sometimes spoken of as the 'descriptive view' of the functions of Natural Science is, in its main outlines, far from new, and has received some measure of acceptance on the part of prominent men of science and other thinkers. I have endeavoured to make this view more explicit and precise than in the forms, often fragmentary, in which it has previously been stated."

Briefly, the 'descriptive view' as here interpreted is this. The data of science comprise 'sense impressions' only. Operating upon these the mind forms abstractions or concepts from which are formulated 'laws of nature' and 'conceptual schemes,' designed to 'represent' certain facts or parts of facts. These products of scientific thought, however, are not objective. They are created, not discovered, by the mind, and nothing corresponds to them in reality—at least the assertion of such correspondence would be metaphysical and to this the scientist as such is not committed. In place of 'correspondence with fact' as the criterion of validity applicable to scientific theory are substituted the criteria of self-consistency, applicability and relative simplicity. The essential point, however, is that these criteria are relative only to theories which refer to a limited and specified domain (and, according to Prof. Hobson, it would

appear that all legitimate scientific theories are of this character). Logical incompatibility between theories relating to different domains affords, therefore, no ground for the denial of their scientific truth. Thus we find it explicitly stated, that it is only when regarded realistically that the mutual incompatibility of the two rival views as to the constitution of matter is of any importance. As conceptual schemes, the corpuscular theory satisfies the criteria of validity with reference to the phenomena of chemical combination, whilst the continuous theory is valid with reference to the phenomena of elasticity and the motion of fluids.

In this peculiar status of scientific concepts Prof. Hobson finds the solution to the vexed controversy with regard to the relation between scientific knowledge and philosophical, including theistic, doctrine. His solution is that between the two no necessary or logical relation as a matter of fact obtains. The study of Natural Science may predispose the mind to accept certain existential propositions which in turn may directly bear upon philosophical beliefs—but this predisposition is psychological only. Scientific doctrines rightly interpreted have no implications with regard to philosophical beliefs. "My aim," says Prof. Hobson in conclusion, "has been . . . to vindicate the perfect freedom of Religious and Philosophical thought from any fear of destructive interference from the side of Natural Science, subject to the sole condition that no encroachment is made upon the autonomy of Natural Science in its own proper domain."

Whilst repudiating the metaphysics of Phenomenalism, Prof. Hobson has apparently based his theory upon a phenomenalist epistemology. In so doing, however much he may have protected Philosophy from the criticism of science, it is doubtful whether he has secured for the latter the same immunity from external attack. For a complete delimitation of the spheres of Science and Philosophy such as Prof. Hobson desires, it is not sufficient that Natural Science should be neutral with regard to Metaphysical assumptions. It is necessary, surely, that the theory of scientific method should be free from entanglements with a dubious epistemology. Philosophical thought in recent years can perhaps be not inadequately characterised as consisting largely of the attempt to avoid just those difficulties which arise with regard to the status of scientific knowledge from the presuppositions of Phenomenalism—criticism of which has come chiefly from an epistemological point of view. The 'concept' appears to be viewed by Prof. Hobson as something separable from reality, as constructed by the mind to represent and describe reality. From such initial assumptions it is to be doubted whether anything of the nature of scientific knowledge is possible at all. It may perhaps be held that nothing beyond a set of self-consistent hypotheses, serving merely as a basis for prediction, is possible in the last resort. Even so, it would still be open to doubt whether a Science so constructed would constitute an independent system of thought devoid of implications affecting philosophical beliefs. In some sense, the data of science are data for philosophy. That the scientist, as such, is not called upon to discuss the metaphysical implications of these data is obvious; but from this it cannot be inferred that such implications do not exist. Prof. Hobson's argument would appear to prove too much. *Ex hypothesi*, the nature of ultimate reality, which is presumed to be the metaphysician's legitimate concern, is not immediately presented. Its nature, therefore, would appear to be knowable only by the use of concepts; and no ground is evident for regarding the constructions of the metaphysician as in any way different from those of the scientist. The notion of an ultimate reality beyond sense impressions becomes itself a mere 'conceptual scheme' having no more existential implication than the atomic theory of matter. Thought

becomes wholly confined to sense impressions and that which it itself constructs.

There are difficulties in this methodology, but to insist on them is to ignore all that is of greatest value in these lectures. The explicitly philosophical doctrines here discussed occupy a relatively small portion of the volume. The major portion is devoted to a history of scientific and philosophical theory in the realms of Mathematics, Physics and Biology. The presentation is designed to illustrate the methodology of the descriptive view in these fields of research. But it will serve a much wider purpose. At a time when philosophers are particularly concerned to bring their theories into relation with scientific thought, Prof. Hobson has presented in a clear and balanced exposition a wealth of material not elsewhere to be found in a single volume. Paradoxically, the impression left by the whole is of the extent to which the topics discussed gain illumination when treated synoptically from a scientific and a philosophical point of view, the separation of which Prof. Hobson seems anxious to effect.

C. A. M.

*Dialogues on Metaphysics and on Religion.* By NICOLAS MALEBRANCHE.

Translated by MORRIS GINSEBERG, M.A., Lecturer in Philosophy, University College, London. With a Preface by Prof. G. DAWES HICKS. Library of Philosophy. George Allen & Unwin, Ltd., London, 1923. Pp. 374. Price 16s. net.

This translation is in places very bad. There are several glaring errors, a great many minor ones, innumerable inferior renderings, and many omissions of qualifying phrases. Considerable ignorance of French is combined with inexcusable lack of care in details. It is important that Malebranche should be translated; but it is a pity that such a translation as this should have come from one of our Universities, with the imprimatur of one of our foremost philosophers, and should have been included in a Library which contains "Appearance and Reality" and "Analytic Psychology".

Before giving a list of some of the most important errors, I should like to make some general remarks on the translation.

(a) *Modalités* should be translated throughout by *modifications*, or *modalities*, instead of by *states of mind* or *sensations* or *modifications* indifferently. On pages 100 and 101 the contrast between modalities and substance is lost in the translation. That this is the true contrast is seen on page 156, lines 14 and 15 from the foot, where the translator had no option but to use the word 'modification'. The point is that in ourselves we do not know substance but only mode, and that true knowledge is based on substance. In the same way, on page 153, lines 8 and 5 from the foot, the contrast is between ideas and modalities; and this contrast is lost when *states of mind* is put instead of *modalities*. On page 155, line 5 from foot, *modifications* should be *properties*.

(b) *Union* of mind and body is translated generally *conjunction*. *Union* would be preferable throughout. It has to be used on page 181 foot, and the two following pages, and in general wherever the conception of union is explicitly discussed; and there seems no reason why *conjunction* should be substituted elsewhere.

(c) The simplicity of the original language, its concreteness and directness, its reminiscences of Plato, are lost in the translation, abstract technical phrases being substituted. This is a great defect in a translation of a book which belongs to a movement in which simplicity of language

was in the nature of a manifesto. Pages 90-91, 102-3, and lines 1-4 of page 95 are especially bad in this respect.

(d) Correspondences between various parts of the text are constantly missed: e.g., the full play of Theodore on the words of Aristes on page 69, about "another world full of intelligible beauties," "a happy and enchanted region" (70, l. 22, 75, ll. 23, 24, 77, l. 9). The play on the word "*méditatif*," begun on page 140, is partly lost on the last line of page 149, where *thinker* should be *meditator*, and on 174, line 23. On page 75, line 3 from foot, *objects* should be *bodies* to preserve the parallelism with the next sentence. On page 153, line 15, and line 11 from foot, the play on the word "movement" is lost, thus also weakening the effect of the next bit of dialogue. Other instances are to be found on page 78, line 16 and line 22; on 101 foot and 102 top, where *knows* should be used throughout, instead of *is aware of*; on 211, where lines 9 and 12 should be parallel; and on page 359, line 20 and page 361, line 9, where "notion commune," in exactly the same setting, is translated first, *axiom*, and then, *common notion*.

For the convenience of those who wish to use the translation, I add a list of the most important errors.

(i) *Negatives.*

89, line 8 from foot: *only* should be *not at all*.

103, line 7 from foot: *cannot know what I am as in that Reason* should be *can know what I am only in that Reason*.

148, line 15: delete *not*.

310, line 6: insert *not* after *in order*.

330, line 9: *must* should be *never*.

(ii) *Important mistranslations.*

173, line 16: *that you have not spoken to me of your doubt to no purpose* should be *that you have made me speak to little purpose concerning your doubt*.

188, lines 11 and 10 from foot: *only on the supposition that what God has willed, etc.*, should be *only by supposition. God has willed, etc.* Compare Leibniz on hypothetical necessity. Cf. 189, line 3 and 205, line 6, where *pre-supposition* should be *supposition*.

191, line 4: *a certain velocity* should be *certain proportions*.

254, lines 10-12: should be *and that they would be moved with velocities reciprocally proportional to their masses, if elasticity made no difference*.

256, line 15: *five thousand nine hundred and ninety-seven thousand times smaller* should be *a thousand times smaller five thousand nine hundred and ninety-nine times*. Aristes means 1000 to the power 5999. In the French text *seven* is an error for *nine*, but this does not justify the mistranslation, which makes the passage unintelligible. The next remark of Theodore turns on the fact that 1000 to the power 5999 is 10 to the power 18,000 approximately.

256, line 4 from foot: *if the world has endured* should be *if the world was to endure*: and 257, line 2, *could* should be *should*.

356, line 6 from foot: insert *necessarily* after *must*.

*to that notion* should be *with those causes* (*avec elles*).

*accomplished* in the previous line is inelegant. The French is simply "tout ce que font les causes doit nécessairement avoir avec elles quelque rapport". "*Avec elles*" seems to be clearly the right reading.

90, line 24: *If we think of God, it follows that he exists*. I should prefer *If we are to think of God, he must exist* as making the meaning clearer.

96, line 8 : *and of* should be *such as*.

231, line 23 : *is still finite, is still, etc.,* should be *so long as it is finite, will be, etc.*

343, lines 16-17 : to make this, which is a school-boy translation word by word, intelligible, insert *that this should be left to after than,* and on line 17 for *than he read to him*.

346, line 20 : *one can prove quite naturally* should be *it can happen much more naturally*. Insert *True* before *But* on line 19.

(iii) *Gross blunders.*

159, line 24 : *novateurs* translated *novices*.

303, line 14 : *que je descendais . . . la rivière* translated as *I was walking down by the river*.

304, lines 7-8 : *vous regardez . . . un clocher par-dessous vos jambes : vous ne devez point le voir renversé la pointe en bas* translated if you look at a clock, etc., you ought not to see it turned upside down.

(iv) *Of less important errors* there is a long list. Some of them have occurred in proof-reading. 147, line 28, *is* should be *as* ; 149, line 9 from foot, *effect* should be *effort* ; 210, line 1, after "as minds do," the full stop should be a comma ; 303, line 12 from foot, delete the second *if* and put semicolon after "it" ; 179, line 1, *How* should be *Now* ; 340, line 5, *Buxtoef* should be *Buxtorf* ; 343, line 14, *simple* should be *simpler* ; 210, line 9 from foot, the first *space* should be *spaces*, the second should be *place*.

Of inelegant renderings, and qualifying phrases omitted, there is no space to give instances. The reader who compares text and translation will find many.

LEONARD RUSSELL.

*Die Philosophie am Scheidewege, Die Antinomie im Werten und im Denken.* By JULIUS SCHULZ. Leipzig, Felix Meiner, 1922. Pp. vii, 331.

This brilliant book is an effective contribution to a conception which has been gaining ground of late, viz., that philosophy is a science of alternatives, and that its problems do not admit of definite solution, simply because in ultimate analysis we are left with a choice between antithetical interpretations which are theoretically equally tenable, and have to choose those which personally we prefer. However, the results of such choices are not chaotic, because men fall into types which exhibit characteristic and stable attitudes towards life. The typical antithesis Dr. Schulz has selected for study is that between the 'practical,' who aim at realising ends, and the 'contemplative' or 'aesthetes,' who are satisfied to disport themselves in the variety of happenings. He admits that neither type is easy to get pure and that mixtures are common, but holds that the antithesis between them is deep and significant. He traces it in their respective attitudes towards the activities of life, in their ethics, their metaphysics, and their readings of the meaning and tendencies of history. With regard to the activities of life the practical type aims at quantity, the contemplator at quality and variety. In ethics the practical type pursues duty, the contemplative perfection or self-realisation. In metaphysics the contemplators require 'explanation' to mean something they can feel in their bones, and so insist on using the twin category of substance and causality as implying an analogy with their activity experiences. Thus the sensible world becomes a world of the appearances of mechanically calculable forces, which are the reality behind it. The 'practical' man on the other hand has no such need to explain away sensible appearances ; it is enough for him to discover the regularities and formulas by which he

can control them. He becomes, therefore, a realist, a vitalist, a teleologist. The arguments by which the historical systems of philosophy are made to fit into this scheme are extremely ingenious, and often brilliant. As regards history, it is clear that the practical type will believe in progress, while the 'aesthetic' will be ready to recognise the mechanical limits imposed on its possibility. The former type, however, will gradually prevail, and this prediction enables Dr. Schulz to compete with Mr. H. G. Wells for the palm of prophecy, and to make his forecast of the future, drawing a depressing picture of the coming race of man, levelled down, dull, and mechanically regular in its actions, like a nest of ants or hive of bees. His prophecies are well thought out and effectively presented; but they make no allowance for what experience has shown to be one of the most ineradicable characteristics of our world. They do not recognise the periodical irruption into it of real novelties, which are not only unpredictable in themselves, but also render incalculable the history which they transform. The 'historian of the future,' though he may stimulate thought and bring off some surprising hits, has set himself an impossible task.

A further doubt suggested by Dr. Schulz's book is whether after all he has selected the most fundamental and suitable antithesis wherewith to illustrate the necessity for philosophic choice. It seems to me that the antagonism between theory and practice has been much exaggerated, and cannot be sustained to the end. For whenever we go beyond traditional *clichés* and try to analyse sharply, the antithesis evanesces, both theoretically and practically. In theory, 'theory' is always an interpretation of life, and 'pure theory' turns out to be a will-o'-the-wisp; in practice, every one has to cultivate both the practical and the theoretic attitude, more or less. Everyone has to act, and no one can act all the time without having occasionally to stop to think, or to look on where he is impotent to act. Consequently the pure types of theoriser and of practical man cannot develop, and despite its ingenuity, Dr. Schulz's argument is not convincing. He could have found a deeper and more instructive alternative in the antithesis between the optimistic and the pessimistic attitude towards life. For there is no doubt that here we have a real antithesis based on psychological temperament, that fortune can produce marked oscillations in the normal balance of a mind's judgment, and that there exist no conceivable means of proving either alternative theoretically right, because any conceivable course of events will always admit of either an optimistic or a pessimistic valuation. Nevertheless Dr. Schulz's book is thoroughly worth reading.

F. C. S. SCHILLER.

*Le Point de Départ de la Métaphysique.* By DR. J. MARÉCHAL, S.J.  
In "Museum Lessianum, Section Philosophique". Bruges, Beyaert,  
1923. 3 vol., pp. 157, 189, 244. 12.50 francs each.

Before beginning this review I had better say that the book is not complete as it stands, since it is intended to publish three more volumes, on the epistemology of Thomas Aquinas and on post-Kantian idealism. The volumes before me have the appearance of being a history of epistemology up to Kant, but the author declares: "Nous ne prétendons pas écrire une histoire de l'épistémologie, mais seulement emprunter à cette histoire les éléments d'une démonstration théorique, nous nous efforçons d'être exact, sans nous piquer aucunement d'être complet" (vol. ii., p. ix.). The purpose of the work is to show the supremacy of the philosophy of Thomas Aquinas, the method is to point out the defects of each important system of philosophy and then attribute them all to failure to adopt the

"*réalisme modéré*" maintained by Thomas Aquinas as against the Scotist and Nominalist views, a method which, pursued as it is, is very likely to irritate readers who are not already firmly convinced of the overwhelming superiority of the mediæval philosopher. The author is, I think, too modest as regards the claims of his book to be a history of epistemology, but the attempt to write what is at one and the same time a historical account of other philosophers and an argument in defence of the philosophy of Thomas Aquinas militates very seriously against the fulfilment of either purpose. In the part of the book before me only one short chapter is devoted to Thomas Aquinas himself, a full account and defence of his epistemology being reserved for a later volume. This is unfortunate, since the account of him given is far too short to form an adequate basis of the argument running through the whole of the three volumes which I have seen, i.e. the attempt to establish the philosophy of Thomas Aquinas by means of a criticism of all other systems of philosophy and by showing that the whole development of modern philosophy is the inevitable result of false assumptions which Thomas Aquinas had already disproved or rendered unnecessary. Under these circumstances, even if I had the special knowledge required to deal with the account of the latter's philosophy, it would not be the place to do so here since that account has been, almost in toto, reserved for a later volume. I can only say that, as it stands and in the absence of whatever further light may be thrown on it later, the criticism of the various great philosophers from Descartes to Kant (with very much of which I agree) seems to do little more than show how the defects of continental rationalism originated from a one-sided insistence on understanding and the defects of British empiricism from a one-sided insistence on sensation. That Thomas Aquinas really succeeded in reconciling understanding and sense is indeed asserted, but the attempt to justify this is deferred to a later volume.

Except for the unsatisfactory method adopted, the statement and criticism of the views of the chief philosophers from ancient times up to Kant is very good. The treatment of Descartes, Locke and Hume seems to me best. The author shows considerable ingenuity in deducing all the main points in Spinoza's philosophy from the assumption that the world is like our logical and generic concepts, a point which he also makes the keynote both of Aristotle's philosophy and of rationalism generally. However, his general treatment of Spinoza seems to me unfair, as also that of Leibniz's principle of sufficient reason, the introduction of which is after all based on the real logical necessity of avoiding a system which deduced existence itself and causal connections from an "analytic" principle of non-contradiction. The account of Kant, to which the whole third volume is devoted, contains much that is of value but impresses me less favourably than the account of most other philosophers. It seems to ignore many of the most distinctive features of Kant, whether out of set purpose, because they were not thought to be of importance for the particular object of the author, or not, I do not know. For instance, the transcendental deduction is made wholly an argument from the possibility of knowledge to the transcendental unity of apperception with the categories, and the opposite and complementary argument from the transcendental unity of apperception to the unity of objects of knowledge as that in which alone it can be realised is practically ignored; no account is given of the proofs of the separate categories; and Kant's "refutation of idealism" would have been better ignored than treated as summarily as it is and without proper distinction between the different arguments used and the more subjective and objective standpoints of Kant. The account of the *Dialectic*, however, seems better than either that of the *Aesthetic* or that of the *Analytic*.

A. C. EWING.



*Esquisse d'une Histoire de la Philosophie indienne.* Par PAUL MASSON-OURSSEL. Paris: Paul Geuthner, 1923.

The history of Indian philosophy has recently been enriched by two works planned on an extensive scale, one of which has not yet reached even to the period of the systematic philosophies. In these circumstances there is room for a compendious sketch treating broadly of the great religious movements, their interrelations, and developments into almost purely metaphysical systems. To do this requires much more than a summarising of previous expositions, which would imply rather a welding together of misapprehensions and falsehoods. It requires a knowledge and understanding of the actual documents, as well as an acquaintance with the large literature that deals with many of the particular problems still remaining. In this undertaking it may be said that M. Masson-Oursel has fully succeeded. In less than 300 pages he gives the outlines of the religion which developed from a prehistoric polytheism to an acosmic theism as well as to a pluralistic atheism, and yet remained in its popular forms as polytheistic as ever.

Both the orthodox and unorthodox systems are so old that their origins all lie in the realm of legend or prehistory. Their continuity is shown in the very instructive chronological table, where they are all arranged within vertical parallel lines without any of the cataclysms from which European thought has suffered. Whether this implies the persistence of dogmas or not, it at least emphasises the continuity.

The author brings out the importance of Buddhism in influencing the orthodox systems, and fully admits the justice of the charge made against the great Sankara by his opponents, that he was a crypto-Buddhist. The account of Buddhism is not limited to the type that has been popularised in England. Indeed, the most prominent feature in M. Masson-Oursel's account is the way in which he shows how the system has been transformed more than any other, and in spite of the fulness of treatment it is to be feared that the devotees of esoteric Buddhism will look in vain for an account of the Buddhist god.

The discussion of later thinkers is very concise, and consequently it may be said that justice has scarcely been done to the Vedantic schools that did not follow the subjective idealism of Sankara. But the value of the book has been doubled by the thirty pages of valuable notes and bibliography. The misprints are the most serious blemish. On page 136 the titles of six works quoted are misspelt. To discuss any of the author's particular views is scarcely necessary. He takes into account and fairly states the views of other scholars, and it is always possible to check his statements by his impartial references to sources, authorities, and translations.

EDWARD J. THOMAS.

*S. Tommaso d'Aquino. Pubblicazione commemorativa del Sesto Centenario della Canonizzazione.* Milan [1923]. Pp. 317.

*L'Anima di San Tommaso.* F. OLGIATI. Milan [1923]. Pp. 149.

*Rivelazione e Filosofia.* M. CORDOVANI. Milan [1923]. Pp. 126.

*La Gnoseologia dell'atto come Fondamento della Filosofia dell'Essere.* G. ZAMBONI. Milan [1923]. Pp. 157.

All these volumes are published by the newly-constituted University of the Sacred Heart, and are all concerned with the philosophy of St.



Thomas in its various aspects. The first on the list, which has as frontispiece a reproduction of the well-known painting depicting the saint with the vanquished Averroes beneath his feet, is a volume of commemorative essays produced in view of the forthcoming celebrations to be held in Rome in honour of the six-hundredth centenary of the canonisation of Thomas. Among the authors are such well-known Thomists as Fr. Gemelli, Dr. M. Grabmann, Fr. Cordovani, Fr. de Munnynck, Fr. Chiocchetti, Dr. Olgiati and others, and the topics of the essays range over pretty much the whole field of the saint's manifold activities. Nearly all are pleasant reading and if the admiration expressed may to an outsider seem occasionally a little on the further side of idolatry, that is no more than one expects in essays produced for such an occasion. Of the three monographs, that of Dr. Olgiati is an exceptionally well-written and clear exposition of the notion of "being" which lies at the root of the whole Thomist philosophy. I could warmly recommend it to any one who is trying to make himself acquainted with the central thought of Thomism and wishes for a lucid introduction. Dr. Olgiati seems to me much happier on this purely philosophical ground than in his essay in the commemorative volume, where he apparently wishes us to think of the thirteenth century, by contrast with our own, as a time when all life was dominated by a grand ideal of unity and subordination. Can he really believe in his heart that Boniface VIII was something like an incarnation of divine order, or that his *Unam Sanctam* was a dignified, not to say Christian, deliverance? And to what sort of superabundant spiritual life do the Fourth Crusade, the defiance of Innocent III by the Venetian Republic, and the Sicilian Vespers bear testimony?

Fr. Cordovani expounds simply and clearly the Thomistic doctrine, now official in the Roman Church, of the relations between reason and divine revelation. Prof. Zamboni's work is of a heavier order. It is a careful and elaborate discussion of the very difficult subject of Thomist epistemology, and a painstaking attempt to translate the mediæval Aristotelian formulæ into terms of modern psychology and *Erkenntnistheorie*. I regret that space will not permit a fuller notice of this solid piece of work.

A. E. T.

*The Fighting Instinct.* By PIERRE BOVET, Litt.D. Authorised translation by J. Y. T. GREIG, M.A. London: George Allen & Unwin, Ltd. Pp. 252. 10s. 6d.

This book is an examination of the working of a particular instinctive tendency in human life: and in many respects it is a model of what such an investigation should be. The author has collected with patience and industry a great variety of material. What is rarer, he knows how to present it in a clear and attractive manner. And what is rarest of all, he has thought clearly about the categories and assumptions which have to be used in an enquiry of this nature. In this connexion one would instance his forceful criticism (p. 141) of that loose way of speaking which describes an instinct "undergoing mutation into its opposite," or his clear restatement (p. 167) of the objections to the idea of a group mind.

He traces the fighting instinct from its first and crudest forms of expression up through all the different ways in which it is altered or modified in its expression in social life. In this connexion he draws a close parallel between the fighting instinct and the sex instinct. He has two particularly interesting chapters on the relations of the fighting instinct to religion

and to the choice of vocations. And he concludes with several chapters on various educational problems which arise in connexion with this instinct. These chapters, by comparison with the rest of the book, seem somewhat lacking in decisiveness. His final conclusions may be given in his own words (p. 240): "Aggressiveness is a part of human nature, but it is very variously expressed at different ages, and may be sublimated. . . . War to-day no longer satisfies the aggressiveness or initiative of most individuals. It is not the pacifist education of individuals that has to be done, but that of the governing classes. . . ."

After all this discussion, however, there still remains a doubt in the mind of the reader whether the main point is ever really established. Is there, in the strict sense, a fighting instinct at all? Is not fighting or aggressiveness rather a function of other instincts or impulses—hunger, sex, acquisitiveness and the like—arising only when they are thwarted or opposed? M. Bovet himself gives us facts which may make us doubt the existence of such an independent tendency towards aggressiveness. And the instances in favour of its existence are few and uncertain in their bearing. If the view expressed in this criticism is correct, it would have important practical bearings. But it would not diminish the value of the descriptive work that M. Bovet has given us, nor would it detract from the stimulating and suggestive character of the book as a whole.

It remains only to add that Mr. Greig's translation is admirable, and that he has added some interesting illustrative notes of his own.

G. C. FIELD.

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## VII.—PHILOSOPHICAL PERIODICALS.

BRITISH JOURNAL OF PSYCHOLOGY. Vol. xiv, Part 1, July, 1923.

**D. J. Saer.** "The Effect of Bilingualism on Intelligence." On the basis of tests of intelligence in vocabulary, composition, dexterity, etc., among 1400 children and 600 university students, the author draws the following (among other) conclusions: (1) Monoglot children in rural districts in Wales show a considerable superiority over bilingual children in the same districts when tested by the Binet scale of intelligence. (2) University students coming from rural areas in Wales show the same differentiation in a test of intelligence. (3) Children in urban districts tested by the Binet scale, and university students from similar districts in Wales estimated for intelligence by a group test, show an inconsiderable difference between monoglots and bilinguals. (4) Mental confusion is seen to exist in bilingual children to a higher degree than in monoglot children even in urban areas in the tests for dexterity, and also in the rhythm tests.

**Lucy G. Fildes** in an article on "Memory Experiments with High Grade Defectives" finds that the main differences between normals and defectives in learning of various kinds are as follows: (a) less power than normals to form associations except such as are very obvious or are forced upon them from outside; (b) a tendency to be confused rather than helped by chance associations that arise; (c) less power of criticising their results; (d) less ability to work under new conditions; (e) a tendency to automatism. They fail to retain chiefly because they fail to associate; they reproduce wrongly because they fail in judgment.

**Lascelles Abercrombie** in "Communication versus Expression in Art" contends that Aristotle's theory of art as Mimesis is really art as expression—not imitation literally but imitation of an idea; and that this involves communication—catharsis of the hearer as well as of the artist. The theory of art is not the same, or so wide a term, as *Æsthetic*: Art essentially includes communication, and the impulse to communicate. The communication of experience differentiates art from the communication of information, argument, etc.

**Louis Arnaud Reid** in "Instinct, Emotion and Higher Life" criticises McDougall's view that all emotions are the affective side of instinctive processes, and the view that the 'higher' processes can be explained by 'emergence'. He stresses especially the significance of emotions accompanying the apprehension of value, and maintains that no collocation of instinctive emotions in themselves, with the most that they imply, is sufficient to account wholly for the higher life of man. Objective apprehension of value is of a different kind "and may result in actions different from merely instinctive actions, and which cannot be analysed into instinctive actions." "Value realised in conduct or artistic creation does not simply 'emerge'. Value in reality is the condition of all emergence."—Other articles are as follows: **E. A. Bott**, "Some Characteristics of Reciprocal Wrist Action". **Lucy G. Fildes**, "Experiments on the Problem of Mirror-writing". **G. M. Wishart**, "A New Type of Pursuit-meter". Part 2. October, 1923. **E. D. Adrian** opening a symposium on "The Concept of Nervous and Mental Energy" maintains that the hypothesis of a special

nervous energy is not necessary in reference to impulses along nerve fibres, while beyond this not enough is known to justify the supposition of 'nervous energy,' and the use of the term is often dangerous, *e.g.*, when without proof it leads to the assumption of a law of conservation of energy holding for the supposed nervous energy. **Henry Head**, continuing, expounds the significance of 'vigilance' as the preparedness of a nervous system for the most efficient or highest type of response; variations in the degree of such preparedness may not only diminish but entirely change the response. "The unity of the mind is the resultant of all those psychical processes which can in any way affect consciousness. These interact and profoundly influence one another, to produce in the end a continuum of highly purposive adaptations. This is not the result of a synthesis of diverse elements, but is the final consequence of the struggle amongst various forms of response." **C. S. Myers**, in the same symposium, contends that so long as we recognise that living tissue displays activity which can ultimately manifest itself as increase or decrease of physical work, no harm can result from applying the term 'energy,' even though we are ignorant of its nature and are unable directly to measure it in terms of mass and velocity. The writer sees nothing in the conception of a special nervous energy inconsistent with the doctrine of the conservation of energy. Identifying central nervous energy with mental energy, he would prefer to speak of psycho-neural energy. **C. W. Valentine** in an article on "The Function of Images in the Appreciation of Poetry," on the basis of experiments with over two hundred students and teachers, draws the following conclusions: (1) in some cases imagery seems to be the main source of pleasure in reading certain poems. With some imagery is insistent in the reading of poetry. It comes without the slightest effort: it "cannot be suppressed". (2) Very decided individual differences were found. Even the nature poems were highly appreciated by some without any perceptible imagery. This does not bear out the suggestion that visual imagery is essential, as it is said to be by some literary critics. (3) Facile imagery is no guarantee that it will be used in the appreciation of poetry. (4) A law of compensation or rivalry is suggested; visual imagery displacing or being displaced by auditory imagery, or by emphasised attention to rhythm, sound or meaning. (5) While a deliberate attempt to image, by dividing attention and over-emphasising imagery, usually spoils the appreciation of a poem, a process of self-coaching in imagery often tends, with suitable poems, to increase the enjoyment of the poem through enriching imagery. (6) When a poem is full of metaphor or symbolism, there is much greater danger of any encouragement of imagery over-emphasising the symbol. In the nature of things, while a word may readily stand for two different things (in virtue of its symbolic function) and blend the feeling of both, the image is nearer to the concrete thing. (7) The strong feeling attached to some poems certainly seems more comprehensible on the assumption of unconscious factors. An article on "The Social and Geographical Distribution of Intelligence in Northumberland" by **James Duff** and **Godfrey Thomson**, shows the estimated average "intelligence quotient" of children among various types of professional and commercial and industrial groups, children of clergy, lawyers and teachers coming out top. As to localities, the writers conclude that the coalfield is low in the frequency of classes A and A +; and both in this and in the average the most rural region is quite as good as the whole (mainly urban) district of Tyneside, excluding Newcastle. Looking at the numbers broadly, they seem to lend some support to the hypothesis that the superiority of the residential suburbs is due to selection, by the operation of the social ladder, from the surrounding districts: and that this has not affected the more remote districts so

much as the coalfield. **Katherine M. Wilson** in an article on "The Correlation of Poetry with Music" gives evidence that the rhythms of music and of poetry can be identical, that the tunes of poetry differ from the tunes of music in being inflected instead of sung, and that just as music has developed forms like the symphony, not strictly comparable with the poems of poetry, so poetry makes use of words which in their aspect as mere labels have developed away from music, whereas poetry differs from prose in using the musical sounds we call words as much for their music as their meaning.—Other articles are: "A Study of Visual After-sensations with Special Reference to Illumination in Coal Mines" by **E. Farmer, S. Adams, and A. Stephenson**; "The Philosophy of Harmonism in its Psychological Bearings and Future Experiments" by **Sir Charles Walton**, and a "Note on the 'Hierarchical Order' among Correlation Coefficients" by **G. H. Thomson**.

**KANT-STUDIEN.** Band xxviii., 1923. It is a matter for surprise and congratulation that the "Kantgesellschaft" which issues this periodical has, despite the disastrous economic situation in Germany, more than trebled its membership since 1914; and the number of "Kant-studien" published in the spring of 1923 gives evidence of what under the circumstances is a very remarkable philosophical activity, as shown in the large quantity of books published, the continued increase in the membership of the "Kantgesellschaft" and the foundation of several new local branches of the society in question. **Reinhard Kynast.** *Zum Gedankengang der Kritik der reinen Vernunft.* [A short summary of the main line of thought in Kant's *Critique*. The author argues that Kant's refusal to extend the application of the categories beyond our forms of perception was due essentially to his introduction of "transcendental psychology," especially his ascription in the *Æsthetic* of psychological priority to the forms of space and time and his confusion of this with logical priority.] **H. E. Timerding.** *Kant und Gauss.* [A discussion of the relation of Kant's view of space and time to the view of this mathematician, and an attempt to show that the two views are not really so dissimilar as might be supposed from Gauss' criticism of Kant.] **Georg Anderson.** *Kants Metaphysik der Sitten—ihre Idee und ihr Verhältnis zur Ethik der Wolffschen Schule.* [The author cites passages to show the *a priori* character of Kant's ethics, distinguishing the "Metaphysik der Sitten" and the "Grundlegung" in this respect, and, while recognising certain likenesses in detail and expression between Kant and the Wolffian school, insists that the fundamental distinction between the Kantian categorical imperative and the Wolffian "eudaemonism" is not in the least bridged by such likenesses.] **Georg Rosenthal.** *Schiller und Kants Kritik der reinen Vernunft.* [This very short article contains inspiring summaries of portions of the moral teaching of Kant and Schiller, which, however, hardly fit the title chosen for it.] **Theodor Ziehen.** *Zum Begriff der Geschichtsphilosophie.* [The function of a philosophy of history is described as threefold: (1) to define history as a science and determine its object, (2) from an epistemological point of view to investigate the grounds, limits and degree of certainty of historical knowledge, (3) to help in determining the most general principles governing the course of history. The first problem is discussed at length with reference to the questions as to whether history is concerned with the universal or only with the individual and as to the criteria which should guide us in deciding what kinds of events are to be selected as the object of history. Four suggested criteria—association with "masses" as opposed to individuals taken alone, extent of influence in space and time, association with universally recognised values, and pragmatic utility—are rejected, and



"increasing differentiation" is then set up as the main criterion of the historical significance of events. The article closes with a discussion of causality in history, in which the author distinguishes between "Kausalgesetzmässigkeit" and "Parallelgesetzmässigkeit". The latter concerns the emergence of new secondary and psychical qualities, while the former can only present new combinations of the same simple elements.] **Rudolf Carnap.** *Über die Aufgabe der Physik und die Anwendung des Grundsatzes der Einfachheit.* [This article distinguishes two methods of physics. One applies the criterion of simplicity to the axioms taken by themselves and gives us, e.g., Euclidean geometry, the other prefers, not that system of axioms which is simplest in itself, but that system which will enable the subject-matter of the science to be described most simply, and so leads to conclusions like Einsteinian relativity.] **Albert Nobel.** *Relationsurteile als synthetische Urteile a priori und ihre intuitive Sinnerfüllung als allein-hinreichendes Kriterium für die Gewinnung neuer Erkenntnisse.* [A vindication and illustration of synthetic a priori knowledge in mathematics.] **Max Faerber.** *Eindeutigkeit und Relativitätstheorie.* [An attempt to reconcile the relativity theory with the existence of objects having definite qualities in themselves, though only capable of measurement relatively to the observer's position in space.] **Paul Hofmann.** *Zur Antinomie im Problem der Gültigkeit.* [Reply to criticism of author's book on "Die antithetische Struktur des Bewusstseins".] Reviews, Obituary Notice of Prof. Alois Höfler of Vienna, and other notices.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 30<sup>e</sup> Année, No. 1, Janvier-Mars, 1923. **J. M. Baldwin.** *L'Aboutissement de la médiation téléologique: l'intuition pratique.* [This is the conclusion of an article begun in the preceding issue of the *Revue*. There is a fundamental distinction between the cognitive, or theoretical, and the "elective," or practical, functions of mind. In respect to the former functions, mediation terminates in the intuition of truth and reality. In respect to the latter, it terminates in the "life of appreciation or in experiences of value" which are "immediate". Value is defined as the character of an object to which our "elective interest" attaches itself. Knowledge is both instrumental to the appreciation of value, and itself a species of value-experience. The immediacy of value-experiences, however, is not primitive but depends in each case on the previous history and development of the agent's affective life. Above all, all value-experiences imply a set of a priori principles which together make up "practical reason". These principles (1) have the character of rules or norms; (2) form a teleological organisation or system; (3) are of the nature of sanctions; (4) are "postulates," as going beyond existing facts (they are prescriptions, not descriptions); (5) have universal scope and validity. Professor Baldwin's conclusion is that "the mediation of ends by means attains its consummation in the postulation of absolute ends which we suppose realised in an ideal which has immediate value".] **E. Meyerson.** *Le sens commun vise-t-il la connaissance?* [A brief argument, largely based on considerations drawn from biology and animal psychology, in support of the thesis that "common sense," as found in the higher animals and in men, rests, like science and philosophy, on the principle of the identification of the diverse, and that, consequently, its world—the world of objects of perception—is a "creation of reason in its search for knowledge".] **M. Winter.** *Le Théorème de Pythagore.* [A brief discussion of the treatment of Pythagoras' theorem in the literature of the theory of relativity, with special reference to the views of H. Weyl.] **R. Bertrand.** *Le refus d'évaluer (Introduction à l'étude du jugement de valeur).* [A study of the "limits of value-judg-



ments," preparatory to an attempt to analyse and define the concept of value itself. The author maintains the thesis that, in proportion as both scientific and aesthetic judgments attain their proper character, the less does the element of "evaluation" enter into them. In short, both science and art in principle refuse to pass judgments of value. The concept of value has no place in them. So far as science is concerned, this is, of course, the familiar view that science deals with facts, not with values. But the author restates this view with much subtlety and freshness, pointing out that just because every qualitative datum and every thing is, for science, just what it is, and must be dealt with as such, there is no room in science for estimating either datum or thing by some ideal standard of, e.g., perfect black or perfect man. In science, we draw our concepts from the facts, and our aim is to make our concepts fit the facts, not to get ideal standards by which to evaluate the facts. The author's view that the same "refusal to value" is characteristic, also, of aesthetic judgments is, on the face of it, much more paradoxical. He justifies it (a) by distinguishing between the judgment of art-criticism which does evaluate, and the genuinely aesthetic judgment of art-appreciation which does not; and (b) by taking the latter as expressing the full realisation of the ideal in the actual, or the "absorption of the real into the ideal". It follows that the sphere of the value concept and of value judgments is identical with the sphere of "free effort in pursuit of an ideal". For, the judgment in which the actual is measured by an ideal standard presupposes in the actual a capacity for realising the ideal, and an effort, or at least a tendency, towards such realisation.]

**L. Weber.** *L'expérience humaine et la causalité physique.* [A long critical review of M. Léon Brunschvicg's book with that title.] **G. Aillet.** *Droit et Sociologie.* [A critical review of two books by Georges Davy, entitled *La foi jurée*, and *Le droit, l'idéalisme et l'expérience.*] **B. Lavergne.** *Du principe des nationalités et d'une théorie générale du droit entre peuples.* [A reply to a critical review, by M. G. Cantecor, of M. Lavergne's book on *Le principe des nationalités et les guerres*, in the *Revue de M. et de M.*, Vol. xxix., No. 2. M. Lavergne now makes clear that he regards the right of self-government not as absolute, but as relative; not as an inherent possession of every national group, but as dependent on the realisation of a number of conditions, such as desire for autonomy among the people, capacity for government, suitable degree of economic development and of scientific culture.] New books. Periodicals.—30<sup>e</sup> Année, No. 2, Avril-Juin, 1923. **M. Blondel.** *Le Jansénisme et l'anti-Jansénisme de Pascal.* [The problem of Pascal's relation to the theologians of Port-Royal, and of the influence of *Jansénisme* upon his thought, is the central problem for every student of Pascal's life and teaching. It is touched on in many of the articles which compose this special number of the *Revue* in honour of the three-hundredth anniversary of the birth of Pascal (19th June, 1623). M. Blondel, in this brilliantly written paper, which should be compared with M. Laporte's paper below, sets himself to show that, although at one period of his life Pascal was a member of the Jansenist circle, and although to the end he retained, at least in words, many of the Jansenist theses, yet really his spiritual development culminated in a very different attitude of mind, and, taken in their full context, his Jansenist formulæ bear a very different meaning. The main point, according to M. Blondel, is that the Jansenist theology was essentially "notional," i.e., a system of abstract concepts built up by logical deduction on certain initial postulates, whereas Pascal's interest is always in the spiritual realities, the facts and sides of religious experience for which these concepts stand and apart from which they are empty. M. Blondel's subtle and skilful illustration of this thesis, by a

minute comparison of Pascal's teaching with that of the Jansenists, is hard to summarise. One example of his method must suffice. Pascal accepts the Jansenist view that, since the Fall, human nature is under the sway of concupiscence. But where the Jansenists from this major premise go on to formal deductions about sin, predestination, grace, Pascal treats all these concepts and formulæ as clues to realities of man's inner spiritual life. Thus he comes, by penetrating and unsparing self-analysis, to track the influences of concupiscence in himself, and on that basis to conceive the ideal of a re-making of human nature, a "methodical education of human sensibility". In general, M. Blondel pleads for the recognition of Pascal's surprising "modernity" beneath the terms of Jansenist Theology.] **Léon Brunschvicg.** *La solitude de Pascal.* [A study of the way in which Pascal, both in his scientific work and in his religious development, was driven into a position of isolation, in which, however, and out of which he sought, and found, communion with God.] **J. Chevalier.** *La méthode de connaître d'après Pascal.* [A careful study of Pascal's utterances on the method of knowing, more especially of knowing God. M. Chevalier insists that Pascal's whole thought is characterised by the fact that it neither forms, nor aims at forming, a system, but that it, nonetheless, proceeds by a method which he describes as "sure, effective, and fruitful". The main points brought out by M. Chevalier are these: (1) for Pascal, "to know is to seek"—a fixed system of abstract concepts is not the truth, but merely the opposing errors between which the truth moves. (2) There is the distinction between the knowledge of "reason," which is discursive and abstract, and the knowledge of the "heart," which is intuitive and immediate. Alternatively, there is the "ladder" of knowledge from sense-experience, via thought, to "charity" and "faith". (3) There are two senses of "incomprehensible"—that which is incomprehensible for us and that which is incomprehensible in itself. (4) There is Pascal's use of probability or the convergence of evidence. (5) Lastly, discussing the famous wager, M. Chevalier points out that it is an *argumentum ad hominem* which, in the guise of a calculus of chances, aims to induce a moral choice. At the same time, the nature of the choice is such that, rightly made, it wins the game. To bet on the alternative that God exists is to open your heart to God, whereupon God will progressively reveal himself to you.] **Filleau de la Chaise.** *Qu'il y a des démonstrations d'une autre espèce et aussi certaines que celles de la géométrie.* [Reprint of a short essay, appended by many editors to Pascal's *Pensées*, and sometimes attributed to Dubos, but probably by Filleau de la Chaise. It is suggested that the essay contains an echo of a conversation with Pascal. The thesis is that the convergence of arguments in favour of the truth of Christianity is such that the chance of accidental coincidence is eliminated, and that it is as difficult to doubt the conclusion as it is to doubt the demonstration of a proposition in geometry. Though each single argument is open to doubt, their convergence amounts to proof.] **H. Höfding.** *Pascal et Kierkegaard.* [Points out striking resemblances in the temperaments of the two thinkers, in their relations to their times, and in their views on problems of the philosophy and psychology of religion.] **J. Laporte.** *Pascal et la doctrine de Port-Royal.* [A long and careful paper which comes to a conclusion exactly the opposite of that of M. Blondel above, viz., that Pascal is inseparable from Port-Royal, or, in other words, that he is a "Jansenist". M. Laporte rests his argument on a distinction, advocated by M. Léon Brunschvicg, between two senses of Jansenism, viz., (1) Jansenism as defined in the five famous propositions of Nicholas Cornet, and (2) Jansenism as embodied in the teaching of Arnauld, Nicole, Quesnel, and others. He tries to show that Pascal was a Jansenist, not in the former sense (for he explicitly

rejected the five prepositions), but in the latter. Yet this does not forbid us to regard Pascal as "the highest and richest incarnation of religious thought known to modern times".] **F. Rauh.** *La philosophie de Pascal.* [An article reprinted from No. 2 of the *Annales de la Faculté de Bordeaux*, 1892, in which Pascal is exhibited as opposing, and correcting, the one-sided Rationalism of Descartes. To Descartes' God, "useless for salvation, the author of geometrical truths," Pascal opposes the living God in our hearts, the Saviour who is made known to us in and through our suffering. Pascal opposes "concrete reality and the moral life" to the "abstract concepts" of the dogmatists.] **M. de Unamuno.** *La foi Pascalienne.* [A brief discussion, by the well-known Spanish thinker, of the conflict of reason and faith in Pascal's religious life.] New books. Periodicals.—30<sup>e</sup> Année, No. 3, Juillet-Septembre, 1923. **L. Brunschvicg.** *La relation entre le mathématique et le physique.* [An address read to the meeting of English and Scotch Philosophical Societies at Durham, in July, 1923, in which M. Brunschvicg points out the profound changes which the theory of relativity is bound to produce in the philosophical theory of scientific thought. The theory of relativity substitutes a relativism which rests on physical facts for a relativism which imposed on nature a particular form of geometry. The question now is, which geometry best fits the actual facts? On its philosophical side, the theory of relativity will have the effect of dissipating the antinomy of subjectivism and ontology. Individual perspectives gain "objectivity" through the formulæ which correlate each perspective with every other, whilst at the same time we must recognise that the "object," in its full nature, is not given, but must be discovered by intellectual synthesis. "The intelligence is, not a faculty of immediate data, but a function of progressive elaboration."] **R. Berthelot.** *La pensée philosophique de Renan.* [A valuable survey of Renan's contributions to the philosophical movements of his time. The first part deals with Renan's attitude towards the contrast between "romantic idealism" and "scientific rationalism". Renan made himself a champion of the latter: "The future will no longer believe in the supernatural. . . . Neither Judaism nor Christianity will live for ever. . . . Whatever superstitions mankind may return to, they will not be these." The second part deals with Renan's "christianised Hellenism," i.e., with the multiple forms of the moral ideal which defines the good life for us here and now, whilst science supplies the knowledge which is power to realise the ideal. He regarded Protestantism as nearer to freedom than Catholicism, but, in any case, he held that "henceforth we must not talk to men of sin, expiation, redemption; we must talk to them of kindness, joy, indulgence, good temper, resignation". He was, thus, the spiritual descendant of the leaders of the Renaissance.] **E. Durkheim.** *Histoire du socialisme: Le socialisme au XVIII<sup>e</sup> siècle.* [A further instalment of Durkheim's lecture-notes for a course on Socialism, given at Bordeaux in the years 1896-1898. A previous instalment, under the title "Définition du Socialisme," had appeared in the *Revue*, Vol. xxviii. (1921). M. Marcel Mauss, who publishes the present instalment, confesses in a prefatory note that it consists rather of rough jottings than of a finished discourse, and that it follows closely M. André Lichtenberger's book, *Le Socialisme au XVIII<sup>e</sup> siècle.* The main point of the course is to distinguish clearly between the "égalitarisme" and the communism of the 18th century and the socialism preached by Saint-Simon at the beginning of the 19th century. The thinkers of the 18th century, like Moselly and Mably, were chiefly occupied with the ethico-political problem of constructing a social order in which it would be impossible for men to be evil, because all opportunity for self-seeking would be eliminated. Socialism, on the other hand, has its roots, not in such

abstract speculations about human nature, but in the concrete sufferings of the working-classes, and aimed, first and foremost, at economic reforms.] **M. Dorolle.** *La conscience et les valeurs morales.* [This article may be summed up as an elaboration, and defence, of Durkheim's theory of conscience. It culminates in the thesis that "civilisation is in all its aspects an increase of conscience, for conscience contains all other characters of civilisation within itself, just as its essential condition, *viz.*, a social life growing ever richer in relations consciously defined, is the means of realising more and more the full unfolding of every human conscience".] **Dénes König.** *Sur un problème de la théorie générale des ensembles et la théorie des graphes.* [A short paper giving a simpler proof of M. F. Bernstein's theorem concerning the division of any given cardinal numbers by a finite number. The proof is based on the generalisation of an idea first applied by the author's father, Jules König, to the demonstration of the theorem of equivalence.] **G. Aillet.** *Droit et Sociologie.* [The second half of a critical review, begun in the preceding No. of the *Revue*, of M. Davy's books.] New books. Periodicals. Necrology: Lionel Dauriac (1847-1923).

REVUE NEO-SCOLASTIQUE DE PHILOSOPHIE. xxv<sup>e</sup> Année. No. 100 (November, 1923). **F. Renoirte.** *La Théorie Physique.* [Discussion of the character and aims of modern physics, starting from the same general position as Poincaré's *Science et Hypothèse*. The object is to show that the attacks made on the "theory of Relativity" are mostly based on a misconception of its purpose. Einstein's question is not "what is the real structure of the world?" but "what is the general algebraic form in which a law should be expressed if it is to be valid for every observer?" Those who look to Einstein for a new revelation of the essence of things are like the pious man who set himself to read the "Retreat of the Ten Thousand" as a guide to ascetic practice.] **H. Pinard, S.J.** *Les Méthodes de la Psychologie Religieuse (concl.).* [An excellent study of the precautions which must be taken to make our "documents" complete and to avoid bias in the interpretation of them, if the methods, *e.g.*, of James or Leuba, are to lead to any result.] **A. Pelzer.** *Jean Duns Scot et les études scotistes.* [Notes on new facts disclosed by the recent revival of Scotist studies. It is interesting to read that, in the author's opinion, it has now been definitely settled that Scotus was a Scotsman from Berwickshire.] **R. Garrigou-Lagrange.** *Cognoscens quodammodo fit vel est aliud a se.* [Reply to the criticisms of N. Balthasar in the preceding number of the *Revue* on the formula *cognoscens fit aliud in quantum aliud*. The author defends the formula as a correct expression of the sense of the Aristotelian and Thomistic doctrine ably enough, but I confess he leaves me still in the greatest perplexity about the doctrine at stake, that, in a sense, the mind is what it knows. He says "when I see the colour of an object, my eye does not become coloured—[though, by the way, Aristotle sometimes talks as if it did?—but in a certain manner, representative or intentionaliter, it becomes the colour of the object." Is this really intelligible?] **N. Balthasar.** *La connaissance de l'autre.* [Continues the argument against which the preceding article is directed.] **M. de Wulf.** *Quelques ouvrages sur l'histoire de la philosophie.* Reviews, etc.

RIVISTA DI FILOSOFIA NEO-SCOLASTICA. Anno. xv. Fasc. vi. (November-December, 1923.) **M. Cordovani.** *Il pensiero cristiano nella "Filosofia dello spirito".* [A spirited exhibition of the radically anti-Christian tone of the "philosophy" of Croce, if exuberant rhetoric deserves the name of philosophy.] **B. Rutkiewicz.** *Concezione finalistica della vita organica e nozione dell' individualità organica.* [The facts of or-

ganic life compel us to recognise in a true organism an individual teleological vital principle, and at the same time to recognise the control and direction of these individual vital principles by a purposive intelligence dominating nature as a whole, in fact, by God. When we try to interpret the empirical facts about the fusion and division of organisms, a variety of hypotheses suggest themselves by which these facts may be harmonised with our general theory. All these hypotheses are merely conjectural and none of them removes all difficulties, but the existence of the difficulties is no valid argument against our main teleological conception of the organic individual.] **G. Rossi.** *Studi rosminiani* (iii.) [A careful study of Rosmini's epistemology. The conclusion reached is that, though Rosmini rightly intends to avoid the "subjectivism" of the *Critique of Pure Reason*, he is not really successful. But whence has Rossi derived his theory that Kant regarded the categories as "only applicable to phenomena"? This is a common error but an error all the same. Kant's doctrine was that the "categories," being the fundamental structure of the rational world, are applicable to "things-in-themselves" no less than to phenomena, but *our imagination* does not provide us with a "schematism" for their application to the "thing-in-itself". The whole Kantian ethic depends on the applicability of the category of causality to a "thing-in-itself". One cannot begin to criticise Kant intelligently until one has grasped the point that his "transcendental" idealism is meant to be something wholly different from "subjectivism". However open his doctrine may be to criticism, criticisms based on the simply false statement that he regards the "subject" as *creating* the "object" are irrelevant.] **E. Ciafardini.** *Il concetto della virtù nel quinto libro delle Tuscolane.* Notes and Discussions. Reviews, etc.

## VIII.—NOTE.

### MIND ASSOCIATION : ANNUAL MEETING AND JOINT SESSION WITH THE ARISTOTELIAN SOCIETY.

THE Annual Meeting of the Mind Association will be held this year at University College, Reading, on Friday, 11th July, at 5.30 p.m.

After the Meeting there will be a **Joint Session of the Aristotelian Society and the Mind Association**, for which the following arrangements have been made :—

#### FRIDAY, 11TH JULY.

8 p.m. Address by Prof. W. G. de Burgh.

"Metaphysical and Religious Knowledge," followed by discussion.

#### SATURDAY, 12TH JULY.

10 a.m. Chairman : Prof. A. N. Whitehead.

Symposium : "The Quantum Theory : How far does it modify the mathematical, the physical and the psychological concepts of continuity?" Dr. J. W. Nicholson, Dr. Dorothy Wrinch-Nicholson, Prof. F. A. Lindemann and Prof. H. Wildon Carr.

3 p.m. Chairman : Dr. Beatrice Edgell.

Symposium : "The Term 'Law' in Psychology : What are its implications?" Mr. A. W. Wolters, Dr. J. L. McIntyre, Mr. Israel Levine.

8 p.m. Chairman : Prof. G. Dawes Hicks.

Symposium : "Critical Realism : Is the difficulty in affirming a nature independent of mind overcome by the distinction between essence and existence?" Prof. J. Loewenberg (of University of California), Dr. C. D. Broad, Rev. C. J. Shebbeare.

#### SUNDAY, 13TH JULY.

10 a.m. Chairman : Dr. J. S. Haldane.

"The Relation Between the Physical Nexus and the Psychical Nexus of Successive Generations : Does the demonstration of physical continuity in the germ-plasms of successive generations of animal organisms also demonstrate the transmission of mental characters?" Prof. James Johnstone, Prof. E. W. McBride, and Prof. Arthur Dendy.

3 p.m. Chairman : Prof. T. P. Nunn.

"Le Continu et le discontinu." Prof. Jacques Chevalier (of the University of Grenoble).

8 p.m. Chairman : Prof. J. A. Smith.

"The Idea of a Transcendent Deity : Is the belief in a transcendent God philosophically tenable?" Rev. R. Hanson, Miss H. D. Oakeley, Prof. Alexander Mair, Prof. Clement C. J. Webb.

The Congress at Reading is at the invitation of the University College. Accommodation will be provided for men at St. Patrick's Hall and Wantage Hall, for women at St. Andrew's Hall.

The inclusive charge for board and lodging from Friday afternoon till Monday morning will be 29s.

The charges for part-time accommodation will be : Bed and Breakfast, 6s. ; Luncheon, 1s. 9d. ; Dinner, 3s. 6d.

Breakfast will be served in the Halls from 8 to 9 a.m. ; Luncheon (at 1 p.m.), and Dinner (at 7 p.m., Morning Dress) will be served in the Senior Common Room, University College. Tea will be obtainable in the Halls and in College (at a small additional charge).

The papers will be published by the Aristotelian Society in a Supplementary Volume, uniform with the "Proceedings of the Aristotelian Society". The price of the volume to the public will be 15s. net. Members of the Aristotelian Society and of the Mind Association will have the privilege of purchasing the volume at 10s., by making payment in advance, whether they are able to attend the Session or not. **The registration charge of 10s. which Members are asked to send with their application includes payment for the volume.**

The British Psychological Society is not taking part in the arrangement of the programme, but members of the Society are invited to be members of the Joint Session with full privileges. Members of foreign Philosophical Societies will also be granted full privileges.

**It will assist greatly to the perfecting of arrangements if Members will make application for accommodation as early as possible to :—**

Mr. A. W. Wolters, M.A.,  
University College, Reading,

who has kindly consented to act as Honorary Local Secretary.

Inquiries concerning the Meetings, Papers and Discussions should be addressed to :—

Prof. H. Wildon Carr,  
Honorary Secretary of the Aristotelian Society,  
107 Church Street, Chelsea, London, S.W. 3.





